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## ORIGINAL ARTICLES.

### THE PROGRESS OF PNEUMATIC DIFFERENTIATION.[1]

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OF NEW YORK.

In the *Medical Record* of January 17, 1885, is found the first report of the application of the Pneumatic Cabinet to diseased conditions of the lungs. This process was called Pneumatic Differentiation and the description was entirely confined to what in the perfected instrument shown to day is the first act, *i. e.*, producing rarefaction in the cabinet about the patient and compelling him to respire the normal atmosphere. That report contains the history of sixty-two cases treated in this manner, seven of which were given in detail, and five there classed as recovered further appear in my second paper delivered before the American Climatological Association, and published in the *New York Medical Journal*, October 3, 1885. Further reference to these cases will be made in a clinical report which I shall have the honor to present to the same Association during the present month. It will show these cases remaining in good health up to January of this year, a space of nearly two years in each case, and without further treatment.

Dr. Houghton, of Chicago, published a report entitled "Pneumatic Therapeutics" in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, November 7, 1885. He advanced some new and ingenious theories suggested by the cabinet in relation to the causes of peri- and inter-vesicular deposit, and reports thirty-four cases of various pulmonary affections, twenty-five of which were classed as phthisis in different stages, four of which in the acute stage recovered and ten improved; three did not improve. Dr. Jensen, the same JOURNAL and date, confirms one of these cases as acute catarrhal phthisis recovered.

Dr. E. Tiegel, of New York, in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, in the issue of November, 28, 1885, discussed "The Physiological Action of the Differential Pneumatic Process on the Circulation." His investigations being made before the present form of cabinet was perfected, he necessarily confined his experiments and arguments to the simple act of immersing the patient in rarefied air while breathing the normal air.

The first full description of the cabinet as perfected was given before the Section on Practice of the New York Academy of Medicine, December 15, 1885, by its inventor, Mr. Joseph Ketchum, in a paper entitled "The Physics of Pneumatic Differentiation" published in the *Medical Record*, January 9, 1886. This was accompanied by a paper from Dr. E. Darwin Hudson, Jr., in the same issue entitled "Present Status of the Pneumatic Treatment of Respiratory Diseases," in which he refers to the preceding work in this field, and shows the value and individuality of the cabinet.

In the *Boston Medical and Surgical Journal*, of July 16, 1885, appears an article from Dr. V. Y. Bowdich, of Boston, entitled "The Treatment of Pulmonary Diseases by means of Pneumatic Differentiation."

Dr. F. Donaldson, Jr., of Baltimore, in the *Maryland Medical Journal*, of February 13, 1886, publishes an article entitled "The Pneumatic Cabinet and Pneumatic Differentiation," in which in a postscript he speaks of the cabinet as giving excellent results, and briefly reports two cases. Among other professional publications on the subject, are those of Dr. W. Everett Smith in THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, November 14, 1885, and the *Medical and Surgical Reporter*, of Boston, February 20, 1886, and Dr. Houghton in *St. Louis Weekly Medical Review*, January 2, 1886. Dr. Sidney A. Fox, of Brooklyn, read a paper before the Kings County Medical Society, February 16, 1886, in which he reported sixty-eight cases of pulmonary diseases treated by pneumatic differentiation. Many other papers have been read before County and State Societies, and are now awaiting publication in the official journals.

In consultation and correspondence with a large number of physicians, I have found that nearly all have been looking for a method whereby we might topically medicate the lungs. In this process that result has been accomplished. Mr. Ketchum has shown that we can not only carry a medicinal agent into the remotest alveolus, but condense it there.[1] It now remains for patient, accurate and careful inquiry to decide whether such medication is efficacious and expedient. Have we not here a field of immense breadth, and will it be fair to adopt the pessimistic argument that nature seeks by the expanse of turbinated bone, and the protected glottis to warm and purify the air before it meets the delicate membrane where its physiological purpose is subserved.

To offset the argument that to change the humidity or temperature of the air, or to burden it with foreign

[1] Read in the Section on Practical Medicine at the Thirty-Seventh Annual Meeting of the American Me dical Association.

[1] Med. Rec. Jan. 9, 1886. Page 31.

matter would seem illogical and impracticable, we have, first, the result of clinical evidence; second, analogy. Our practical experience teaches us that the pulmonary mucous membrane and deeper tissues tolerate invasion without serious disturbance. We know how readily water is absorbed by the lungs in conditions of partial drowning. Effused blood with its various inflammatory products, may not itself occasion disturbance by its physical presence in the deeper pulmonary tissues excepting so far as it excludes air. Nothing that prudence could suggest as a remedial agent could be any more irritating than the decomposed and ichorous discharges that sometimes bathe the inter-pulmonary surfaces. Analogy shows that surgeons have for years been disregarding the physiological function of a part when disease demands interference. The serous membranes and cavities have been invaded and washed with the most irritating agents. Every mucous tract of the body has demonstrated its tolerance of violence. But it may be asked what is the effect where an agent applicable to a diseased pulmonary area is inevitably introduced into areas remaining in health? There is nothing in this question that exclusively applies to this process. Would not many of our surgical operations give doubtful evidence of our mechanical skill if kind nature did not endure, forgive and repair? When the head throbs with fever that is threatening life, do we hesitate to give an agent of the power of quinine in antipyretic doses? For a remote ache or pain is it not sometimes necessary to narcotize the entire nervous system?

Since the days of Sir James Y. Simpson, McDowell and Morton, have we not chilled the inter-pulmonary tissues with chloroform and ether, and though as I believe by so doing we invite congestion, does it deter us when the greater necessity arises?

Again, is there anything ethereal about the pulmonary tissues that prohibits an effort to cleanse and disinfect? Indeed, in some cases it seems as though the process of repair in pulmonary tissue is as rapid as in the scalp or tongue, and perhaps for the same reason. There is a great diversity, or I may better say, confusion in the professional mind as to whether Koch's bacillus is the cause or concomitant of tubercular disease. Certain it is that a few well-known agents are capable of destroying these organisms. It is moreover certain that in every case of phthisis in which they are found serious, progress has been made or violent symptoms continually threaten.

There must have been a time in the history of a given case, when lung tissue rendered congenial for the lodgment of its bacterian enemy received its first impregnation. Could we ascertain this period. Can we imagine any surer method of extermination than to introduce at the seat of lodgment a well-chosen germicide. Would we care then if the adjacent tissues were sterilized? Indeed, I think I have already demonstrated,[1] that by the differential pneumatic process it is possible to save healthy lung tissue from tubercular infiltration.

It is then desirable to have in our power a means by which we can medicate the lungs, and with the conviction in my mind that amounts to a certainty, I neither shrink from the possibilities of therapeutic error nor grow discouraged, because in a given case the relation between the extent of disease and a well directed remedy is insurmountable. I have certainly more than once secured results which could only be fully explained consistently with the hypothesis that a thorough and prolonged course of antisepsis had by coincidence, rather than calculation, been instituted at the time when tubercular germ life though present, had not established an impregnable foothold. When from the contemplation of this hypothesis I turn to the constant progress of scientific inquiry, and especially the recent developments on biological analysis, I desire to record the prediction that at no distant day a system will be developed and adopted, whereby we can certainly sterilize a pulmonary area, and gain the mastery of tubercular disease to a degree hitherto thought chimerical. However remote the hope thus expressed, it surely affords encouragement to those advanced investigators who systematically employ the microscope as an aid to diagnosis. This method will also detect the early manifestations of grave diseases and will fortify our diagnosis against heretofore unanswerable accusations of unawarrantable conclusions.

The pneumatic cabinet as a mechanical device, independent of its ability to convey a remedial agent to diseased pulmonary structure, and condense it there, is itself a factor of no small moment as a salutary measure. Its capacity to increase expansion, to thoroughly ærate the blood, and to thereby promote assimilation and functional activity is attested by the uniform experience of those who have observed its effect.

In patients where the correction of faulty frame developments or distortion is retarding health, this may alone confer all the benefit required. In certain conditions of instituted disease, such correction may render cure or improvement possible to the exclusion of remedial influences.

These results, certainly the most obvious, appeal to some investigators as the most important of its accomplishments.

If in the selection of appropriate agents, whether emollient, sedative, germicidal or stimulating, there is a field for discrimination, equal opportunity is offered for choosing, first, the character of force, and secondly, the degree. The annals of medicine are replete with the history of cases treated by means of air chambers, where air at different degrees of density and humidity exerts a therapeutic influence. Drs. Bowditch and Hudson have well shown the essential distinction between this and all other devices for treating pulmonary disease.[1] Waldenberg's gasometer seems to some to produce essentially the same mechanical effect.

In pointing out the fallacy of such a conclusion I do not mean to imply the inutility of inhaling condensed air or of expiring into rarefied air. For these purposes the Waldenberg condenser is complete and

[1] N. Y. Medical Journal, October 3, 1885.

[1] Boston Med. and Surg. Jour., July 16, 1886. Medical Record, Jan. 9, 1886.

sufficient, for in order to duplicate this by the pneumatic differentiator, it would be necessary to have the patient to stand or sit outside the cabinet and breathe into it either at pressure or vacuum. The processes then would be nearly identical.

But as to the operation of the pneumatic cabinet, what are the facts? In the first act, that of immersing the patient in rarefied air, say at two inches fall of the manometer, we remove one-fifteenth of the atmospheric pressure, which is taking away one pound pressure per square inch of the superficial area of the lungs. If, as frequently happens in the progress of phthisis, communicating and healthy bronchi have become occluded by sputum, the imprisoned air must expand, and a corresponding force be brought to bear behind the occluded point. This I have demonstrated before you to-day.

The rarefaction then is allowed to run down to one inch of the manometer or to a safe and prudent degree. Now begins the act of inspiring the normal atmosphere, while immersed in vacuum, which to some seems equivalent to inspiring the condensed air of Waldenberg, but there is not a similarity excepting that of the force of the weight of the normal atmosphere. The patient's thorax relieved of a part of its burden, the inter-pulmonary molecules of air separated from each other are inviting their fellows from outside, and are ready to assume normal relations when they meet. In other words an aspirating force is created, that compels a circulation of air with its normal quota of oxygen which no prudent amount of direct force could produce in the alveolus. This may be amplified as follows: In the cabinet the atmospheric support of the chest walls being withdrawn, each ultimate cell is expanded, and there the initial energy is developed. This expansion is communicated along the respiratory avenues to the respiring air. Thus each molecule separated from its neighbor by the increased space of its habitation permits the tidal air at normal density to penetrate into the enlarged cell.

While in the compressed air method the inititial energy is developed in the apparatus and the tidal air is forced down and super-imposed on the cushion of residual air. The inefficiency of compressed air to carry moisture marks a further and important difference.

*Second:*—Compressing the air about a patient in the cabinet, and allowing him to expire into the normal atmosphere. Here again carelessness may not detect the difference between this and expiring into rarefied air. At a pressure of two inches of the manometer we are exerting a collapsing force about the lungs of one pound per square inch. The patient now makes an expiratory effort into normal air. Should it be thought desirable the pressure can be carried to such a degree that volition cannot prevent the imprisoned air from rushing out through the alveoli, bronchi and trachea, and unlike the act which it is thought to simulate the initial movement is in the alveolus, for its air is driven and not sucked out.

The third act, *viz.*, that of alternating compression and rarefication is unique, comprehensive and unapproached by any previous device. Mere respiration can be maintained if necessary independently of volition. Moderately applied, it affords a respiratory assistance, which many diseased conditions welcome. It further promotes the condensation of vapor, by increasing the relative difference of atmospheric pressure at inspiration and expiration.

This description must suggest to your minds many conditions in which if properly applied the process will be of no uncertain value. Time will not permit me to here record the results attained since my last clinical report. The results of independent investigators in different sections of the country, all substantiate the claims originally published. These physicians are located in many of the larger cities, and several are in sections of the country where climatic influence may demonstrate the cause of failure in certain conditions where climatic advantage has been denied. The reports of recovery and improvement are largely in excess of negative results and failures.

As an office instrument at present applied the cabinet fully answers the purposes for early conditions or for the occasional relief which irrecoverable cases can obtain. For methods of diagnosis one application will frequently so change the physical character of the chest sounds that that which before treatment was obscure and indefinite can readily be appreciated and classified. Every one must see that in occasional cases the cabinet as at present applied is at an immense disadvantage. This suggests the necessity for the establishment of properly constructed sanitaria where inclement weather cannot interrupt the treatment nor prevent its frequent and, if necessary, prolonged application. In many a case ultimate phthisis primarily induced by delayed resolution of acute disease, be it pneumonia, pleurisy, the essential fevers or the various forms of septicaemia, would have been cheated of its victim if it had been possible to apply this process in the sufferer's sick chamber.

How many times are we called to watch the battle between disease and repair with our hands tied until the moment when Nature's pure air can be made to freely circulate throughout the lungs for the double purpose of preserving their integrity and ventilating the sluggish blood which has so long been poisoning the nervous centers! The utility of the instrument will be greatly augmented when we can have it placed in the sick chamber of such a case. Several prominent practitioners who cannot afford the time to properly administer this treatment have adopted the practical plan of sending their patients to some younger physician in whom they have confidence and with whom they have made agreeable conditions.

The older practitioner having the larger opportunity for detecting the earliest manifestations of disease thus insures his patient prompt institution of an efficient and radical treatment at a stage when recovery may be anticipated.

I have been specially devoted to the study and analysis of the pneumatic process for the last three years. My experience, now matured, convinces me not only of its far reaching power within the thera-

peutic regions so far developed, but of its promise in fields as yet only suggested. Its use has provoked in many minds rational theories which, as I believe, will employ a generation.

The great mechanical power of the apparatus is apparent to any observer. In ignorant or careless hands it is capable of deadly force. The corollary of power is peril. But perhaps the greater danger is that it may fall into the hands of routinists, who disregarding the necessity of accurate diagnosis may apply it where its use is contraindicated and for the resultant failure condemn it generally.

When it has produced in a given case what may be called the maximum of improvement, whether this is reached by one or one hundred applications, its use should be suspended. An elastic conscience might distort sound judgment so long as the hopeful sufferer proved a source of revenue.

It needs no reflection or argument to suggest the grievous misfortune to humanity if the men who already prey upon the credulous consumptive with no weapons save natural depravity and cunning shall find in the cabinet a device by which they can impress the imagination and perhaps chance upon an exceptional result. Its potentialities of good and evil alike dedicate this instrument to the profession. It should be our desire and, if opportunity offers, our duty to secure it against the temerity of charlatans or abuse by the avaricious practitioner.

It was with a thorough appreciation of these considerations that the inventor sought the counsel of the late Professor Samuel G. Armor who had watched with much enthusiasm the progress of his early experiments. In accordance with his advice, which was later on thoroughly endorsed by Prof. Henry I. Bowditch, of Boston, and other leaders in the profession, an advisory Board of Physicians has been invested with the absolute power of rejecting or accepting any application for the use of these cabinets. This plan has so far restricted the process to absolutely appropriate and trustworthy hands. For the last year of his life, Prof. Armor was chairman of this Board and since his decease Prof. Alfred L. Loomis, of New York, has occupied that position. It is designed to add to this Board a representative physician from each of the prominent medical centers of the country whose more accurate knowledge of the physicians residing in his own community will enable him with greater certainty to accept responsibility for them when entrusted with the apparatus.

This cabinet has already increased the sphere of professional activity and benefit, while it beckons us to further accomplishments. Surrounded by safeguards which preserve it as a strictly professional instrument, it deserves from us to whom it has been thus entrusted, not only faithful test but unprejudiced recognition of its capacities when established by sound reason and clinical evidence.

At my request reports have been sent me by many of those physicians who are using the cabinet, with expressions of opinion and clinical reports. Having occupied already so much of your time I shall only refer to them generally. Others are preparing reports for their State and county society meetings, and a mass of clinical evidence is being collected which cannot fail to direct attention to this department of pneumotherapy.

Dr. C. B. Herrick, of Troy, N. Y., reports three cases, one of improvement with a gain of twelve pounds, another with a gain of five pounds, and the third a marked improvement from unresolved pneumonia. Dr. W. A. De Watteville, of New York, reports three cases with his conclusions; two of them, both 3d stage cases, became quiescent, the third was a failure.

Drs. Classon and Clarke, of Albany, New York, send full details of one case in which they confidently expect recovery from acute phthisis, with reference to several others in which the process is giving relief.

Dr. R. H. Babcock, of Chicago, reports two cases in which improvement is noticed and says, "It is in my opinion a valuable adjunct." "Its influence over cough and expectoration is of such marked benefit as to alone recommend the method," and speaking of the stimulated circulation says, "were this alone and nothing more the result of treatment with the pneumatic cabinet, this were enough to recommend it to the profession."

Dr. W. Everett Smith, of Boston, reports a case of incipient consolidation at apices in which he does not hesitate to claim a recovery.

Drs. Cutts and Fernald, of Washington, report a case of marked improvement after thirty sittings with a gain of eight pounds in weight and absence of signs of the previous pulmonary lesion.

Dr. E. E. Trudeau, of the Cottage Sanitarium at Saranac Lake, New York, says: So far as he has gone he can bear testimony to the usefulness of the method in those cases where good might be expected from expansion and improved pulmonary nutrition, but in cases where localized antiseptic treatment is indicated it is less satisfactory. He finds its most brilliant field in cases when contraction of connective tissue as in chronic phthisis exists, with mal-nutrition, debility and dyspnœa, also in apical lesion with coincident constitutional disturbance. He also says: "Most patients suffering from incipient or chronic phthisis have shown more or less marked improvement, one case gaining seventeen pounds in weight with an entire disappearance of all moist sounds in the lungs."

Dr. J. H. Blanks, of Meridian, Miss., has sent me a classification of twenty-seven cases, twelve of which were bronchitis, and in which nine recovered, two improved and one did not improve. Two were unresolved pneumonia, with one recovery and one improvement, and thirteen were of phthisis with one recovery, five improvements, four non-improvements and four deaths. The latter were so far advanced that they were unable to walk without assistance, and one received only four treatments. He also sends full details of two cases, one of practical recovery and one of marked improvement.

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# THE DIFFERENTIAL DIAGNOSIS OF SCROTAL TUMORS.[1]

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The differential diagnosis of scrotal tumors is not always an easy matter. The peculiar anatomical conformation of the parts, the varied morbid alterations of structures normally located, and the frequent intrusion within the scrotal pouch of dislocated or adventitious tissue renders a positive diagnosis difficult, if not indeed impossible in certain cases. It has been our fortune to witness a number of grave errors of judgment as to the nature of tumors within the scrotum, and our misfortune to occasionally participate in these mistakes. When we consider that a scrotal tumor may be a hernia, hydrocele, orchitis, epididymitis, varicocele, cancer, sarcoma, hæmatocele, or a complication of two or more of these affections, the reason for an occasional blunder is more apparent—and an allusion to previous mistakes may be a reminder of certain diagnostic points that will serve to warn the members of this Society from pitfalls where others have stumbled.

"A tumor is a morbid swelling, prominence or growth on any part of the body." Surround this definition with the scrotal walls and you embrace our subject. The scrotum is a pouch formed of the common integuments for the reception of the testicles. It is evenly divided externally into two halves by a prominent ridge, a continuation of the raphé from the under part of the penis to the perineum. The skin of the scrotum is thin like that of the eyelids, and darker in color than most other parts. It is very loose and extensible, as evidenced in connection with scrotal hernia or very large hydroceles.

The *dartos* is a thin layer of contractile tissue of a reddish-grey color immediately beneath the skin, and intimately connected with its inner surface. Bowman considers the dartos to be muscular and composed of "unstriped elementary fibres." Scrotal movements by the dartos are involuntary and peristaltic or vermicular in character. Contraction is excited by cold, fright or venereal orgasm; relaxation by heat, old age, debility. Galvanism produces no effect. Beneath the dartos there is a quantity of loose cellular tissue. Underlying this we find the superficial spermatic fascia continuous with that covering the lower part of the abdominal walls, and descending to form a sheath for the spermatic cord and enveloping the testis.

Beneath this is the cremaster muscle, which is interesting from a diagnostic point of view on account of its action in elevating the testicles to the abdominal rings, and the fact that sometimes this power of retraction is entirely volitional and might be used by a malingerer to simulate an inguinal hernia. Presupposing a thorough knowledge of the anatomy of the testis on the part of my auditors, a detailed description is not needed; it will only be necessary for us to remember the relation of the parts composing these glands. First, the tunica vaginalis, a delicate serous membrane in the form of a shut sac, enveloping by means of its outer layer all of the testis except its posterior edge and lower extremity, is derived from the peritoneum. The line of attachment is about five lines from the inferior extremity of the testis. Second, the tunica albuginea, a dense fibrous layer forming the covering proper of the gland, but not including the epididymis. Third, the gland structure proper, consisting of the seminiferous tubes, blood-vessels, lymphatics and nerves. Fourth, The epididymis is a continuation of the gland proper, containing the excretory ducts which empty into the vas deferens, which is the real excretory duct of the testicle.

At an early period of fœtal life the testes lie behind the peritoneum in the region of the kidneys, being loosely attached to the peritoneum by the mesorchium. The inguinal canal has already been formed, and is occupied by a cord-like structure, the *gubernaculum testis*, which extends from the bottom of the scrotum to the testis, to the under surface of which it is attached, and as the testicle gradually descends during the last months of fœtal life the gubernaculum testis shortens and guides the way. At the same time the peritoneum enters the inguinal canal in advance of the testicle, descending in a loose fold as the gubernaculum contracts and draws the testicle down after it. The descent of the testicle is usually completed shortly before the birth of the fœtus; and, as a rule, the neck of the peritoneal sac is obliterated by occlusion before the child is born, thus cutting off all communication between the tunica vaginalis and the peritoneal cavity. This occlusion may be incomplete, thus giving rise to congenital hydrocele, or it may occur at two or three different points, leaving free serous spaces intervening, occasioning encysted hydrocele—or hydrocele of the cord. So much, then, for an outline of the anatomical points of our subject.

For diagnostic or clinical purposes tumors of the scrotum may be divided into two general classes, viz.: reducible and irreducible—reducible tumors including all herniæ (except strangulated), varicocele, and congenital hydroceles. Irreducible tumors of the scrotum would include all tumors connected with the testicle, all hydroceles (except congenital), and strangulated hernia. Tumors of the tegumentary surface of the scrotum, such as inflammatory œdema, elephantiasis and epithelioma, are usually so characteristic in their history as to offer no special impediments to a correct diagnosis.

Scrotal hernia may be mistaken for:

1. Hydrocele of tunica vaginalis, cord, or encysted hydrocele.
2. Sarcocele of the testicle, simple, tuberculous, cystic or malignant.
3. Varicocele.
4. Hæmatocele.
5. Bubo.
6. Undescended testis.

In scrotal hernia, as a rule, the tumor is soft and doughy to the touch, light weight, smooth and regular, painless unless inflamed or strangulated, of sudden advent from above downwards, resonant on percussion, fills the inguinal canal, has cough impulse,

[1] Read before the Chicago Medical Society, July 19, 1886.

gurgles, is of normal color, opaque, may exist on either side, the spermatic cord is concealed, does not fluctuate, aspiration is negative, bowels may be embarrassed. It can be reduced unless the hernia is strangulated or incarcerated.

1. (a) In hydrocele of the testicle the tumor is ovoid or pyriform, develops slowly from below upwards, is firm, tense and elastic, fluctuates, is translucent, dull on percussion; is irreducible; spermatic cord is neither concealed or displaced; the inguinal canal is empty; bowels unaffected; aspiration reveals fluid.

(b) In hydrocele of the cord the difference is that the tumor is circumscribed, encysted, and sometimes reducible, situated usually near the epididymis, but returns after reduction irrespective of position.

(c) In congenital hydrocele the fluid disappears completely within the peritoneal cavity by compression of the tumor for a short time.

2. (a) In sarcocele of the testicle the tumor is usually hard and resistant, heavy, often nodular and irregular; painful; grows slowly; dull or flat on percussion. The inguinal canal is empty; no impulse on coughing; bowels unaffected; irreducible; no auscultatory sounds. Simple sarcocele is chronic orchitis. Both the epididymis and body of the gland are affected. The cord is usually thickened. Abscess of the organ may occur. It is caused usually by an injury followed by inflammatory deposits.

(b) Tubercular sarcocele is met with most frequently in early manhood, and may occur in any constitution; in the strong and robust as well as the weak and cachectic; and although often associated with tuberculerization of other organs, it is common enough to find the tuberculous nidus in the epididymis, not as a sequence of gonorrhœal inflammation or some slight injury followed by inflammatory infiltration—as was formerly believed—but as a coincident.[1] The progress is slow and insidious. The gland at first moderately enlarges with little or no pain, the hypertrophy being especially marked in the globus major. Presently the outline of the tumor becomes craggy or nodulated, and circles around the testicle from behind forwards in the form of a crescent. After several months, this adventitious tissue exceeds in size the testicle proper, and then it begins to soften at points and one or more abscesses burst and discharge a thin shreddy pus. The vas deferens is greatly enlarged.

(c) In syphilitic sarcocele or gummata the history of the patient guides us in the diagnosis. Also, we find that the body of the gland is usually the seat of the infiltration which takes place in the connective tissue between the tubuli seminiferi, the epididymis undergoing little if any enlargement. The cord and vas deferens are unaffected. There is little or no tenderness, and the peculiar sensation elicited by squeezing a healthy testicle is absent. The tunica albuginea is very greatly thickened. Hydrocele is a frequent complication and tapping is often required to establish a diagnosis.

*Cystic tumors* of the testis closely resemble hydrocele, and differ chiefly in being opaque instead of translucent. Aspiration should be practiced before pronouncing positively upon their character.

Cancer of the testicle primarily invades the body of the gland, and almost invariably assumes the encephaloid form. Most observers doubt the existence of other varieties of malignant disease in this organ. The development of the disease is rapid. The patient has a sensation of weight, pain and dragging in the testis, the scrotum becomes distended, reddish or purplish, and the superficial veins are seen to be enlarged. The skin adheres to the gland, ulceration occurs, fungus protrudes, the inguinal glands are secondarily involved, and the patient by this time presents the characteristic cancerous cachexy.

3. In varicocele the tumor is knotty and irregular like a bag of worms, bluish in color; most frequent upon the left side; increases in size upon the application of heat; develops gradually; is dull on percussion; fluctuation doubtful; spermatic cord not affected; inguinal canal not involved. No cough impulse. It reduces spontaneously by any position that favors increased venous return, but returns immediately when the patient stands up notwithstanding pressure at the ring. There is weight and dragging in the scrotum.

4. In hæmatocele the advent is sudden; usually traumatic in origin; grows from below up if spontaneous; fluctuates until coagulation occurs; is at first soft, and hard after coagula form. It is pyriform in shape; ecchymotic; irreducible; heavy; dull on percussion. The spermatic cord is unaffected, and the inguinal canal empty. There is often pallor and prostration from loss of blood. The bowels are unaffected.

5. Bubo is seldom mistaken for a scrotal tumor, and it is unnecessary to name differential points.

6. An *undescended testicle* is painful, and pressure upon it yields a peculiar sickening sensation. It is found wanting upon the side occupied by the tumor, and the scrotum is imperfectly developed upon the same side. It is sometimes mistaken for a bubonocele.

In order that it may not be thought that the somewhat minute enumeration of diagnostic points mentioned in connection with these various scrotal tumors is tedious or unnecessary, I beg to present the following cases which have fallen under my observation during the past few years. In all of them a more or less serious error of judgment occurred.

*Case 1.*—S. J. J., æt. 30. On Sept. 16, 1883, Mr. J. called upon me, stating that he was suffering from a hydrocele and wished a permanent cure; that he had consulted Dr. Roswell Park, who advised tapping it, but that as Dr. Park was about leaving the city, his family physician, Dr. Doering, advised him to place himself under my care for a radical cure. Mr. J. stated that when he was a boy while in swimming one day his attention was directed to the fact that the right side of the scrotum was larger and heavier than the left, but that he had never paid any attention to it until about a year previous to the time he

[1] The bacilli tuberculosis which were formerly probably disporting in the blood in a state of innocuous desuetude, now finding a fertile soil in the increased vascularization of the part, proceed to inhabit, multiply and take possession of the part to its ultimate destruction—just as other microbes have an affinity for the epiphysis of long bones where the blood current is sluggish.

called upon me, since which time he had noticed a gradual enlargement that caused no pain or discomfort except a sense of weight and a tired feeling in that side; but as it was steadily and slowly increasing in size he decided to have it removed. It was soft and fluctuant to the touch, pyriform in shape, slightly translucent; inguinal canal full and prominent, and from the history and physical appearance I concluded that it was a hydrocele complicated with a tumor connected with the testicle, and, having some doubt as to the exact nature of the growth, I took him to Dr. E. Andrews, who concurred in the opinion of a hydrocele and thought the tumor was possibly a sarcoma or cystic testicle, and advised emptying the tunica vaginalis and then examining the tumor more satisfactorily.

On Sept. 22 I aspirated the tunic in the presence and with the assistance of Dr. Roler, obtaining about two ounces of clear serum instead of a pint or more that I expected. I injected sac with 5 per cent solution of carbolic acid, and kept him in bed for a few days. I then concluded that the testicle was cystic and advised its removal, which was readily agreed to.

On Oct. 5, in the presence of Drs. Andrews, Doering, Beery, Stowell, and two or three students, I operated by making a long free incision down through the successive layers upon the tunica vaginalis, which I then loosened and raised up to examine more carefully. It was soft, fluctuant and opaque. I made a free incision into it, and instead of fluid out gushed a mass of omentum that had distended it, closely surrounding and masking the testicle. A small quantity of serum was present, an ounce or two perhaps. All doubt now disappeared and we had to deal with a case of incarcerated congenital omental hernia of the tunica vaginalis—the testicle was perfectly normal. The omental mass was tied in sections with catgut and cut off short, being left as a plug in the inguinal canal. All bleeding points were ligated with catgut. The testicle was returned within the tunic, a drainage-tube inserted, and the wound washed out with a carbolized solution and antiseptic dressing applied.

Mr. J. made a steady and uninterrupted recovery, resuming work in less than two months. The only complication was a circumscribed cellulitis extending along the cord, that appeared about two weeks after the operation, and was treated by hot poultices and blisters for some ten days, when the induration disappeared. I have seen the same complication in three other cases of operations upon the testicle, and believe it is a common occurrence. In this case the error was made of not attaching sufficient importance to the filling up of the inguinal canal.

*Case 2.*—S., æt. 29, a healthy young man, applied to me in August, 1881, for relief from a subacute epididymitis that came on a few weeks before as the result of a slight injury. It was treated by a suspensory, strapping and alterative ointments, but steadily and slowly enlarged until October, when it became nodular and fluctuant at two points, encroaching more and more upon and around the testicle. Dr. Gunn saw him about this time and opened an abscess, regarding it as a simple abscess of the connective tissue and not involving the gland. It continued to discharge, the testicle increasing in size and the health of the patient declining until December, when a consultation was held. Drs. Gunn and Fenger advocated the removal of the diseased organ. Dr. Andrews favored temporizing. It was removed on January 11, 1882, and found to be tubercular. This operation was also followed by a circumscribed peritonitis and cellular induration along the cord. Prompt recovery followed, and he has enjoyed excellent health since.

*Case 3.*—Boy, æt. 8 years. I was called to reduce a strangulated hernia, when I found a simple hydrocele.

*Case 4.*—W., æt. 60. Had been troubled with an old inguinal hernia for years. On November 10, 1880, it came down and could not be returned. Four days later an operation was made, when, on opening the peritoneal sac, a cyst was found that had acted as a valve at the neck of the canal, preventing the return of the bowel by taxis. This condition was not suspected prior to the operation.

*Case 5.*—Chas. M., æt. 23. Had a right oblique inguinal hernia for ten years, supposed to have come from the kick of a horse. On February 6, 1883, it became strangulated. At the examination a large painful tumor was found. Within the external ring in the inguinal canal a smaller tumor was detected, which proved to be an undescended testicle. The gut was returned to the abdominal cavity, and as the testicle was useless and in the way of wearing an appropriate truss, it was removed. The young man made a good recovery.

*Case 6.*—J. W., æt. 46, had a congenital left inguinal hernia. On September 15, 1882, the bowel came down and became strangulated. Thirteen days later an operation was made, and a large mass of omentum and a knuckle of ileum found. These were returned, when the scrotum was found to be occupied by an immense hypertrophy of the cord and epididymis measuring eighteen inches in length and weighing twelve ounces. This was cut off and the stump tied at the ring. The patient died from exhaustion. This case is reported by Dr. John L. Atlee, and is certainly a rare complication.

*Case 7.*—In December, 1883, Dr. John Bell, of Benton Harbor, Mich., brought me a farmer, in consultation, who had multiple cysts of the cord. He had been treated by a quack for spermatorrhœa, said quack telling him that there were 478 cords running from his testicles to his heart, and if he had any operation done and a single one of those cords was wounded, instant death would ensue. I aspirated the cysts, and they have not refilled as yet.

*Case 8.*—Tuberculosis of testicle mistaken for cancer.

In conclusion I only desire to say that the diagnosis of scrotal tumors requires careful study and the employment of all the means at our command. No symptom should be lightly passed over and we should accept nothing on trust, but verify all statements ourselves. Diagnosis should be by exclusion.

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## A CASE OF CONGENITAL ABSENCE OF THE OSTIUM VAGINÆ, AND DELIVERY BY THE ANUS.[1]

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"On April 24, 1885, late in the evening, I was called to attend Mrs. Hanna Thomas, who was suffering the pains of childbirth. Her age was 35, and she bore every outward sign of perfect physical development, and of being well nourished. I was told by the midwife that she had been in labor since the middle of the day preceding. The membranes had been ruptured early in the labor, and the patient was very much prostrated by her protracted and inefficient efforts to expel the fœtus. The unsatisfactory progress caused her attendant to request the calling in of a physician.

"Examination developed an entire absence of the vaginal orifice, and passing my finger along the perineum, it sank into the distended anus, and encountered the fœtal head just within the opening. The anus was dilated to about the diameter of three inches. Never having met with such a singular complication attending labor, I sought the advice and assistance of my friend Dr. J. F. Y. Paine."

The foregoing history is furnished by Dr. G.S. Sykes, the professional attendant of the case in question.

Examination confirmed the diagnosis of Dr. Sykes as to the absence of vaginal outlet, and revealed the presence of the fœtal head within the rectum, arrested at the distended and resisting anus. A clammy skin, sighing respiration and rapid, feeble pulse, told the story of strength wasted by a fruitless labor. The uterus, exhausted by its unavailing efforts, was acting in the most feeble manner; the anus, though considerably dilated, was insufficiently so to admit the passage of the fœtal head, and was rigid and unyielding. The indications were too clear to admit of a doubt as to the treatment. Chloroform was administered to the third degree, a Simpson's obstetrical forceps applied with comparatively little difficulty, and by moderate effort the head was promptly delivered. The shoulders and trunk were delivered by a *vis a tergo* exerted by squeezing and downward pressure on the uterus through the abdominal parietes. The placenta was speedily expelled by expression.

There was no apparent laceration of the anal sphincters. There was no unusual hæmorrhage at the time of her accouchement, nor was there subsequent oozing. Firm tonic contraction of the uterus quickly followed a dose of ergot. The anus regained its normal characteristics within a few hours. The subsequent treatment was conducted on general principles, viz.: rest in the recumbent posture, antiseptic irrigations per rectum, etc. There was nothing uncommon in her convalescence. She was able to sit up on the sixth day, and entered upon her accustomed domestic avocations at the end of the second week.

On the 8th of October, five months and sixteen days after her accouchement, I was granted the privilege of a thorough examination, and found, as already stated, entire absence of the ostium vaginæ. All the parts within the vulva presented the characteristics of virginity—the clitoris was normally developed and situated; the vestibule and posterior commissure bore no signs of having been stretched, distorted, or lacerated by childbirth; the urethra was in its proper place; the nymphæ and labia majora were in every respect natural in their virginal symmetry of outline. Two fingers were readily introduced into the rectum and passed upward along the anterior rectal wall for a distance of about two inches, when it was clearly appreciable that the surface gradually sloped forwards and upwards and merged into the anterior vaginal wall, which at this point was natural in its anatomical relations. From a half to an inch below the *os uteri* could be distinctly felt the free edge of a membranous curtain, which represented the upper third of the recto-vaginal septum. There was nothing abnormal either in the size or position of the uterus, or in its relations to the vagina.

Examination with the speculum fully confirmed the revelations of the digital exploration. The most painstaking investigation failed to detect the slightest trace of cicatricial tissue. My conclusion was that the malformation was congenital.

This woman has borne three children, all at full term and well developed, but dead. The cause of death seemed to lie in the early drainage of the amniotic fluid, and the protracted labor. Nothing noteworthy occurred during either of her accouchements, except their continuance beyond ordinary limits and the exhaustion which, as a natural consequence, ensued. Her labors had lasted, she said, about two days; but had not in either instance been followed by fever, pain, abnormal discharge or other evidence of inflammatory action. Her convalescences had been uniformly short; sitting up on the sixth day, and resuming her ordinary duties at the end of the second week. Menstruation has always been regular (except during pregnancy) as to interval, duration and quantity lost, and painless. Sexual desire and its gratification during coitus was in every respect satisfactory. She had never been made aware, either by the exit of the menstrual flux, the method of sexual intercourse, or even the strange manner of her accouchements, that she was different from other women. Her husband, after being closely questioned, asserted most positively that he had never entertained the faintest suspicion that there was anything the matter with his wife, out of the usual order of things.

[1] Read in the Section on Obstetrics, at the Thirty-Seventh Annual Meeting of the American Medical Association.

## MEDICAL PROGRESS.

A CASE OF SHORTENING BY OPERATION THE BONES OF THE LIMBS IN THE TREATMENT OF INJURIES COMPLICATED WITH EXTENSIVE DESTRUCTION OF THE SOFT PARTS.—DR. MARTEL, of St. Malo, first conceived the idea, in 1882, that when extensive destruction of soft parts had taken place it would be better to reduce the bones to a corresponding

length by resection than to rest satisfied merely with amputation. He was then attending a suitable case, but he was restrained from putting his idea into practice at that time, partly by the advice of a surgical friend, and partly by the untoward course of the case in question.

However, on June 2, 1885, a patient, B., æt. 32 was taken into hospital with a very severe compound fracture of the left leg. Anteriorly was a large wound whose extent was due to actual destruction rather than to retraction of the skin and subjacent tissues. The tibial fracture, oblique and not comminuted, was exposed in this wound, the ends overriding. The fibula was fractured in the middle.

The wound and its recesses were carefully washed with "strong" carbolic lotion, and afterwards, the limb was enveloped in a thick "*appareil ouaté*. The immobilization removed all pain. Reaction was moderate, (on the third day, evening, temp. 39.8.) Quinine for the fever; morphia and chloral for insomnia. Appetite returning. The remainder of the history is that of a suppurating, but not inflamed wound, with sloughs separating and cicatrization progressing up to February 25, (the fifty-fifth day of the treatment). On this day Dr. Martel resected about 75 millimétres of the tibial shaft, sawing obliquely both above and below. Much of the bone removed was necrosed. A corresponding portion of the fibula was removed through a separate opening. The two tibial fragments were sutured with a single stitch of thick silver wire, which does not appear to have held them very firmly together. The carbolic spray was used during the operation, and both during the operation and afterwards, the wound was carefully washed with "strong" carbolic lotion. Drainage with a large tube behind the fragment. Then carbolized charpie dressing and gutta-percha splints. On March 25 it is noted that "the osseous segments are united, but the uniting tissue is flexible." On or about this date the silver suture was removed from the bone. On April 25 "consolidation appeared complete." June 8 a fenestrated, silicated bandage was applied. August 3 "only two small lenticular" ulcerations remained, which soon afterwards healed completely.

The amount of shortening was 7 to 8 centimétres. There was a good deal of stiffness of the ankle joint. But otherwise everything was satisfactory; the limb was well shaped, and crutches and sticks were shortly discarded for a high boot.

The author is only cognizant of a single instance in which a surgeon was guided by an idea analogous to his own. In the *Centralblatt für Chirurgie* No. 50, 1884, Karl Loebker published a case in which, in order to facilitate apposition and suture of the ends of nerves and tendons, cicatrised and contracted after a transverse wound of the forearm, he resected portions of the radius and ulna. This operation was only moderately successful as regarded the ultimate results.

With regard to the question of what is the best time at which to undertake an operation like the author's he points out that, until sloughs have begun to separate, it is not possible to be certain of the limits of destruction. After stating other considerations, he gives his opinion that the most favorable moment for resection is to be found between the tenth and twentieth day after the accident.—*Gaz. Méd. de. Paris*, 1886. Feb. 27, March 13 and 20.

Segmental Neuritis.—There appear to be good grounds for the division of neuritis into "interstitial" and "parenchymatous" varieties. The latter form has many causes, but the pathological anatomy, consisting in a series of modifications ending in atrophy of the nerve, presents but little variety in its characters, and has a close resemblance to the series of changes such as occur in the Wallerian degeneration of divided nerves. Apart from this form there is another, described first by Gombault, under the name of "névrite segmentaire periaxile." Guinea-pigs submitted to a process of slow poisoning by lead, without presenting any sign of localized or diffuse paralysis, yet became the subjects of a scattered neuritis of such a kind that one part of the length of a nerve fibre was inflamed, whilst the parts above and below it were in a normal condition; these disseminated patches sometimes occurred in more places than one on the same nerve fibre. Generally the alteration involves a single nerve segment, but it may transcend these limits or even be restricted to a portion of one segment. The process is of a genuine parenchymatous character, but affects only the myelin sheath and the protoplasm of the sheath, not the axis cylinder, which is never interrupted, and remains in relation with its centres; the nuclei multiply and the myelin undergoes segmentation. This form of neuritis is not special to guinea-pigs or to cases of chronic saturnism. It occurs also in man, and Gombault has observed it in the subjects of protopathic muscular atrophy, amyotrophic lateral sclerosis, and traumatic neuritis. He has also described it in a case of diphtheritic palsy, and in one which clinically resembled acute ascending paralysis.. However, this periaxial segmental neuritis has not been frequently observed in further researches on the pathological anatomy of peripheral nerves, and since 1880 P. Meyer alone has given a description of its existence in a case of diphtheritic paralysis. In the *Archives de Neurologie*, No. 33, MM. Pitres and Vaillard—already well-known for their researches, especially on parenchymatous neuritis—have described an interesting case of pulmonary tuberculosis on which cutaneous diphtheria became grafted, and was followed by amblyopia, paralysis of the soft palate and limbs, with disorders of sensation, paresis of the diaphragm, irregularity of the heart's action, and death from pulmonary hæmorrhage; the brain and spinal cord were found to be healthy, but the peripheral nerves and spinal roots exhibited the changes indicative of the segmental form of neuritis. It has been shown by the same observers that peripheral neuritis occurs in tuberculosis, and they discuss the question of the dependence of the changes spoken of above on diphtheria or tuberculosis. For fuller information reference should be made to the valuable paper, which is illustrated by well-executed plates.—*Lancet*, June 12, 1886.

NITRO-GLYCERINE IN BRIGHT'S DISEASE.—The employment of nitro-glycerine in chronic renal disease, for the valuable service it renders in dispelling or moderating uræmic symptoms, is based upon the fact that high arterial tension is the constant concomitant of uræmia. How far it is desirable to habitually employ a remedy having so pronounced an action upon the circulation as nitro-glycerine is yet undetermined; but experience of its value in the diseases which are marked by abnormal arterial tension is accumulating. The latest contribution is by DR. KINNICUTT, of New York (*Medical Record*, April 17, 1886), who has studied the effects of the drug in several cases, with results which harmonize with those obtained by Rossbach and Burzbinski, to which allusion is made. The continued employment of the drug in slightly increasing quantity does not only relieve headache, dyspnœa, palpitation, and other symptoms referable to the uræmic state, but is marked by an increase in the diurnal excretion of urine, together with a notable diminution in the amount of albumen in it. Cases are given where the albumen was noted quantitatively, and they show that in some the drug has a marked effect in its reduction. At the same time, as one case shows, there is often great variability in the albuminuria of chronic nephritis, which renders it important that similar observations should be made on a large scale before trustworthy conclusions can be arrived at. The amount of nitro-glycerine administered should be just within the limit of producing any subjective symptoms. Dr. Kinnicutt's conclusions may be given in his own words: "1. That in nitro-glycerine, given in small doses and frequently repeated, we possess a powerful agent in lowering the increased blood-pressure which is very constantly associated with the development of uræmic symptoms. 2. That it has the power to control or relieve many of the paroxysmal disturbances of the nervous system which are included under the general term of uræmia; of these, headache and asthma are especially benefited by its use, the relief being more marked and continuous than that obtainable either by opium or chloral. 3. That its influence upon the daily excretion of urine and serum-albumen in parenchymatous and interstitial nephritis is apparently to increase the former and diminish the latter. 4. That in the systematic and prolonged use of nitro-glycerine in appropriate doses, in chronic nephritis, we possess a means of maintaining more or less continuously a lowered blood-pressure, of often averting or relieving critical conditions, and thereby prolonging life."—*Lancet*, June 12, 1886.

ABORTIVE TREATMENT OF MAMMARY ABSCESS.—DR. LLEWELLYN ELIOT, of Washington, says: "About fifteen years ago I witnessed the beneficial effects of the free application of spirits of turpentine to abscesses and whitlows in their early stages. The result in each case in which such applications were employed was a drying up and disappearance of all traces of inflammatory or suppurative processes. From the earliest years of my professional life this has been a routine treatment with me, and arguing from analogy, it has been adopted in cases of mammary abscess when seen in its incipiency. The only disadvantage attending this treatment is the odor of the turpentine, which is of no importance when contrasted with the intense pain, sleepless nights and suffering accompanying suppuration of the gland.

"If upon the discovery of a drawing pain upon suckling, or a tender, hard spot in any part of the gland, the part be bathed with the spirits of turpentine, and then covered with a cloth, rag, or piece of flannel saturated with the same, we may, as a rule, look for the disappearance of the hardness, the tenderness, and all other uneasiness attending this troublesome affection, in the course of two, or at the most, three days. During the course of such a treatment the child may be nursed from the affected breast, but not as frequently as from the well one. It is hardly necessary to say that all traces of turpentine should be washed away before such nursing. The amount of milk secreted has never appeared lessened in the cases observed, nor have any of the ill results of the continued use of turpentine followed either in the mother or in the child.

"Whether this manner of dealing with this affection be in general use or not cannot be said, still there is no mention of it in many of the recent text-books on obstetrics. It is not claimed to be infallible, but its application will be attended with no bad results even if it be unsuccessful. Strapping, pressure, rest, applications of belladonna and soap-liniment, and the continuous application of an ice-bag, are among the various modes of treatment employed, but my faith now centres around the application of turpentine as an abortive of mammary abscess."—*Medical Record*, July 31, 1886.

SUGAR AND CORROSIVE SUBLIMATE AS A FIRST DRESSING IN WAR.—DR. HEIDENREICH, in a paper published in the *Vrach*, Nos. 19 and 20, strongly recommends as a first dressing on the field of battle a mixture of corrosive sublimate with powdered sugar in the proportion of 1 to 1000. It is important that when this is prepared the sublimate should be evenly distributed, and this is easily affected by first dissolving the mercurial salt in a little spirit and then carefully rubbing up the sugar with it. The spirit ultimately evaporates and leaves a powdered mass of uniform composition. A little packet is supplied to each soldier, containing a capsule in which is 5 grammes of the mixed powder—i.e., $\frac{1}{200}$ of a gramme of sublimate—for the purpose of sprinkling on the wound; also a good-sized piece of gauze impregnated with $\frac{1}{3}$ per cent. of its own weight of sublimate by means of Bergmann's process, which consists of dipping it in a solution containing 10 parts sublimate to 500 glycerine, 1000 alcohol, and 1500 water. Some hygroscopic wadding is also supplied, and this, when enclosed between two folds of the gauze, forms a dressing measuring 650 sq. centim., which is large enough to cover a somewhat extensive wound. The whole is enclosed by means of a layer of varnished paper and a triangular bandage, which is fastened with two safety pins. The author claims for this mixture of sugar and sublimate the advantage of being

a particularly powerful antiseptic and quite innocuous. Sugar, he says, is the best substance for diluting the sublimate, being itself somewhat antiseptic. This dressing has also the additional advantage of being suitable for use wherever water may be procurable. This, of course, is not always the case, and where it is the source is frequently in a marsh or pool of anything but hygienic appearance. Under these circumstances he advises that filtration should be resorted to, and consequently proposes that a kind of filter consisting of flannel impregnated with sublimate should be included in the packets supplied to the men. The whole contents of the packet weigh only 75 grammes, and are exceedingly portable and inexpensive.—*Lancet*, June 12, 1886.

The Diagnosis of Tubercular Disease of the Urinary Organs.—Dr. Irsai, in the *Wien. Med. Presse* (No 36, 1884) records two cases in which tubercular disease of the kidney was diagnosed from the presence of Koch's bacillus in the urine, the diagnosis being confirmed by *post-mortem* examination.

M. de Gennes (*Ann. des mal. des org. génito-urin.*, September, 1885), says that the discovery of tubercular bacilli in the urine is difficult, partly because centres of tubercular disease are often present in the kidneys for a long time without discharging their contents into the urine, and partly because of the excessive dilution of the bacilli in the urine. Hence, one may not find the bacilli in the urine, although the urinary organs are the seat of tubercular disease; but on the other hand, one must not mistake for Koch's bacillus any of the many bacteria which grow in altered urine. It is necessary, therefore, to examine only the sediment of the urine after it has stood for several hours, and in the examination to be careful to declorize with nitric acid very thoroughly. Even with these precautions, and after examining numerous specimens, it is rare to meet with more than two or three bacilli. He has in five cases of cystitis, however, determined the tubercular nature of the disease by finding the bacilli in the urine, while there was no other evidence of tubercular disease in the cases. His conclusions are, that just as in the case of the lungs, so in the case of the urine, if one finds no bacilli, one cannot infer that there is no tubercular disease; but, if one finds even a single bacillus, of the nature of which one is absolutely certain, then the diagnosis of tubercular disease is affirmed.—*Revue des Sciences Médicales*, Jan., 1886.—*Glasgow Medical Journal*, May, 1886.

Quinine for Traumatic Neuralgia.—In a note on this subject Mr. F. J. Hart says:

That quinine cures neuralgia, especially of the asthenic type, is a matter of ancient history, but it is not so generally recognized that it is useful in the following severe injuries:

Case 1.—This was a case of dislocation of shoulder by direct violence, with great bruising. After reduction, agonizing pain set in, following the course of the brachial plexus. It was compared by the patient to the "gnawing of a dog." Sleep was quite banished. Chloral and opium, in full dose, gave no relief. A 5-grain dose of quinine, however, gave almost instant ease, with some hours' sleep; and, although the pain returned, it was always controlled in the most remarkable manner by the quinine. Only three or four doses of the remedy were required.

Case 2.— In a severe wrench of the shoulder, with rupture of muscular fibres, attended with great pain, especially at night, relief was quickly obtained by 4-grain doses of quinine, given every six hours. The patient described the effect of the medicine as most rapid and soothing.

Case 3 was one of a fall from a ladder, producing fractured rib and contusions. There was great pain, "not one wink of sleep," in spite of chloral (gr. 25) and opium (1 gr). The patient was very violent and excitable. A fourth of a grain of morphine, hypodermically injected, calmed him somewhat; but the pain returned, and as I did not wish to push the opium, his kidneys being defective, I substituted 2 gr. of quinine ever four hours. After this, he got much better, and confessed that he could bear easily the little pain which remained. All these patients were full-grown men.—*British Medical Journal*, June 5, 1886.

Re-Injection of Blood During Amputation at the Hip-Joint with Rapid Recovery.—By A. G. Miller, M.D., Edinburgh. In a case of strumous disease affecting both hips, the left knee and the left elbow, with a large abscess connected with the left hip, the patient being in very feeble condition, amputation at the latter joint became necessary. The limb having been exsanguinated to the middle of the thigh, and a powerful elastic tourniquet applied at the groin, a rapid circular cut was made right down to the bone in the upper part of the thigh, the femur sawn through, the femoral artery and some smaller vessels tied, and the tourniquet removed; some hæmorrhage still occurring from a few small vessels, they were also ligatured. All the blood which escaped, both from the femoral artery and the smaller vessels, amounting to eleven ounces, was caught in a vessel containing a solution of phosphate of soda and re-injected into the deep femoral vein. By an incision on the outer side of the thigh the head of the femur was then dissected out. The wound was dressed antiseptically. The patient suffered no shock whatever, nor depression of temperature after the operation. For the first few days, he was flushed and had a fuller pulse than before the operation, but he had no rise of temperature. The weakness and the anæmia of the patient, together with the increased vascularity of the parts due to the disease, rendered it very likely that he would not have survived the operation, had not the greater part of the blood lost been re-injected—the fact being that from the exsanguification of the leg, together with the reinfusion, there was probably an ultimate gain of blood after the operation.—*Edinburgh Med. Jour.*, February, 1886. —*Annals of Surgery*, 1886.

Coagulation of the Blood.—In a short paper with the above title, Dr. Ernst Freund relates the results of his experiments undertaken to show the effect

of oil in hindering the coagulation of the blood after it is withdrawn from the body. Blood from the carotid of a dog collected under oil remained fluid at ordinary temperatures for twenty-four hours; as did also blood which had been poured into glass vessels whose walls had been smeared with vaseline. In the latter case coagulation did not ensue even if the blood were stirred with an *oiled* glass rod, although it took place in a few minutes if the blood were poured into an unoiled vessel, or were stirred with a dry glass rod. If blood caught in this way were prevented from drying, and if contamination with dust was prevented, coagulation might be prevented for several days, during which the corpuscles sank to the bottom, leaving the clear plasma on the surface. Similar observations were made with oiled cannulæ and tubes, in which the blood remained fluid. As the result of his experiments the author comes to the conclusion that, as on the one hand the absence of adhesion of the blood to the walls of the vessels prevents coagulation, so, on the other, if any adhesion is allowed, after the blood is drawn from the body, this acts as the starting-point of the coagulation.—*Medizin. Jahrbücher*, Heft. i, 1886, page 46.—*Glasgow Medical Journal*, May, 1886.

TUBERCLE BACILLI IN ADDISON'S DISEASE.—It has long been held by some writers that the fibro-caseous change which characterizes the suprarenal bodies in Addison's disease is of tubercular nature, and the histological characters upon which this opinion rests have been strengthened by the detection of the bacillus tuberculosis in the morbid material. For this observation pathology is indebted to Herr Goldenblum, of Dorpat, in a well-marked case of the disease which he examined in 1884. The subject was a man 24 years of age; there was well-marked bronzing of the skin and mucous membranes, caseation of both suprarenals, general wasting, pulmonary emphysema, cloudy swelling of the heart fibres, liver, and kidneys, and swelling of the intestinal solitary glands and the portal lymphatic glands. At Professor Thomas's suggestion the diseased capsules were examined by Ehrlich's method, and large quantities of tubercle bacilli found in the caseous masses (Virchow's *Archiv*, Bd. 104, s. 393). Although Guttmann in 1885, and Rausenbach in the present year, have reported cases of suprarenal bacillary tuberculosis, yet in neither case were symptoms of Addison's disease prominent, and both these cases must yield priority to Goldenblum's. He remarks that on the bacillary test his case goes to prove that in Addison's disease, in which the capsules are the only organs that exhibit caseation, the lesion must be regarded as a local tuberculosis, unless it can be proved that the occurrence of the bacilli is a secondary event.—*Lancet*, June 12, 1886.

INTUBATION OF THE LARYNX.—In a report of the Chicago Medical Society, Dr. Strong describes a successful case in which a No. 2 O'Dwyer's tube was kept in a child's larynx for sixty-eight hours. The affection was acute catarrhal laryngitis.

At the same meeting Dr. Waxham stated that he had often used tubes, and spoke of seventeen cases, with eight recoveries. It is important to note that Dr. Waxham had used them in cases of diphtheria.

Dr. Allan, Glasgow, in *Outlines of Infectious Diseases* (Churchill, 1886), refers to the use of tubage in the treatment of diphtheria, and recommends Macewen's tubes as a valuable method of treatment.

Considering the unsatisfactory state of our therapeutics in diseases of the larynx accompanied by membranes, and the frequent necessity of operative interference, the results of those who have tried tubage must be carefully noted. There can be little doubt that tubes will prove invaluable in many conditions of the larynx when asphyxia is threatened. It would perhaps be right to say, however, that most surgeons express considerable doubt as to the efficacy of tubage in conditions associated with the formation of membranes (particularly in diphtheria), and hence such cases as the above rather indicate a more extensive trial of this operative method.—*Glasgow Medical Journal*, May, 1886.

ALBUMINATES IN MILK.—SEBELIEN describes in the *Zeitschrift für phys. Chemie*, vol. ix. p. 444, two new albuminates of milk besides caseine, viz., lactoglobulin and lactoalbumen.

1. To obtain lactoglobulin, the milk is first carefully neutralized with soda lye, in case it be of an acid reaction, and then saturated with chloride of sodium. The filtrate on being warmed produces a flocculent precipitate, which consists principally of phosphate of lime; the filtrate of this, on being saturated with sulphate of magnesium, precipitates lactoglobulin. The percentage of lactoglobulin in milk is very small.

2. Lactoalbumen is obtained by adding one-fourth per cent. of acetic acid to the filtrate of milk, mixed with sulphate of magnesium. By solution in water, dialysis, precipitation of the remaining solution through alcohol, and washing with alcohol and ether, lactoalbumen can be obtained as a white powder, wholly soluble in water. Lactoalbumen is by no means identical with serum albumen, and differs from caseine in containing a higher percentage of sulphur (the former having fourteen per cent., the latter seven per cent.), and a lesser percentage of phosphorus.—*Therapeutic Gazette*, June 15, 1886.

SALOL.—PROFESSOR VON NENCKI, of Berne, has discovered a new antiseptic, to which he has applied this name. It is a whitish aromatic substance, insoluble in water, but soluble in alcohol. It is highly recommended as a substitute for the salicylate of sodium in the treatment of acute rheumatism, as it is alleged that it does not cause the nausea and other unpleasant effects of the latter salt, and is more rapid in its action. It is a valuable antipyretic in phthisis. As an antiseptic it is said to be of value in the treatment of intestinal catarrh, typhoid fever, and cholera. From the fact that it prevents urine from decomposing, it is suggested as a local application in vesical catarrh. As a powder suitable for sprinkling over wounded and ulcerated surfaces it is said to possess all the antiseptic properties of iodoform without its disagreeable odor.—*N. Y. Medical Journal.*

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PUBLISHED WEEKLY.

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SATURDAY, AUGUST 14, 1886.

## THE DIAGNOSIS OF INFECTIOUS DISEASES.

At a recent meeting of the New York County Medical Association, PROFESSOR E. G. JANEWAY, the worthy successor of the late Professor Austin Flint in Bellevue Medical College, read a paper on "Certain Points in the Diagnosis of Some of the Infectious Diseases." In the preparation of this paper he was able to bring to his aid his large experience in private and hospital practice, especially that gained by a several years' service as one of the Health Commissioners of New York City.

In speaking of smallpox Dr. Janeway said that he had known the beginning of a considerable outbreak of the disease to be traced to a single mistake in diagnosis. He thought that one of the greatest safeguards against an error in diagnosis as regards smallpox, consisted in having such a classification of the affection fixed in the mind as should seem to take account of the various methods of its manifestation. From many of the text books important facts bearing on the method of development of certain forms of the disease are omitted; and he suggests the following classification as convenient: 1. Purpura variolosa. 2. Variola vera. (a) Confluent; (b) Discrete; (c) Corymbose; (d) Hæmorrhagic. 3. Varioloid. 4. Variola varicelloides. The distinction between purpura variolosa and the ordinary hæmorrhage type, where the blood is extravasated with the vesicles, should be kept in mind, and this is best accomplished by making such a classification as the one given. Many have failed to recognize or to have any knowledge of the existence of this form; and many errors of diagnosis must be attributed to this. One great danger is in making mistakes between this disease and a malignant type of some other infectious diseases. The full history of the case should be obtained; the possibility of a visit to a strange place, the getting of some cloths, etc., may furnish a clue in the absence of other clue. As an illustrative case he cited one to which he was called in another city, to decide as to the nature of a strange variety of fever. One patient had already died, and a second was seriously ill with it. He found the latter sitting up in bed, with a weak pulse, though with but little febrile movement, and suffering with dyspnœa which appeared to be due to changes in the blood. There were purpuric spots over the chest, abdomen and legs, and in one place there was a small vesicle, of no determinate character; but nowhere were there any papules or umbilicated vesicles. He suggested that the disease was probably purpura variolosa, and this opinion was confirmed, *first*, by learning that the patient had attended the one who died (the fatal issue taking place about twelve days before the beginning of his own sickness); and *secondly*, several of those who had been exposed during the sickness and at the funeral of the first patient were down with the fever; and that at least one of these had an eruption which proved to be discrete smallpox. This case, he thought, illustrated three points in establishing a diagnosis: 1. It is important to know the nature of the disease from which a malignant case, itself not possessing positive features, has developed. 2. Should the patient have died this may be done by an investigation of others exposed to the original case; these having perhaps a milder and more characteristic type of the malady. 3. The result of exposure to the malignant case may in some instances be a proof of the nature of the disease. He was particular to emphasize that we must not be content to simply consider the eruption and the patient's condition, but must use every means in our power to establish a correct opinion as to the nature of the disease producing this state which is demonstrated purpuric or malignant. He also introduced a case to illustrate the importance of sometimes making an autopsy to decide the nature of a doubtful disease.

Mistakes between smallpox and scarlatina may occur in those cases of variola in which a marked red efflorescence first occurs, followed by darker spots and papules, and finally by vesicles. In some cases petechiæ appear in places, and hæmorrhages follow; and not infrequently in severe cases the vesicles may appear first on the inner aspects of the the thighs and in the axillary spaces, the face being free. As the throat may be sore at this time as a result of the eruption, a mistake may be made if the order of events be not kept in mind. Such mistakes

have been made in these cases as considering the vesicles sudamina. One point to be remembered is, that an examination which omits an inspection of the abdomen and chest, and particularly of the inguinal and axillary regions, may lead to a mistaken opinion in the case of a severe infectious disease.

In regard to measles there may be a two-fold mistake: On the one hand the first stages of the small-pox eruption, prior to the formation of the vesicles, may lead one who looks hurriedly at the case, and does not consider the invasion symptoms, to diagnosticate measles. The other mistake occurs when one looks at a severe case with a red skin, and in it a number of dark maculo-papules, together with hæmorrhages of larger extent, and hæmorrhages from other places, as the nose. One who sees the first stage may consider it as scarlatina; while a little later the numerous papules may lead to a mistaken diagnosis of black measles.

The mistake of considering syphilitic eruptions as variola is more common than the reverse. Most of these mistakes are the result of want of close observation of the whole eruption, together with a consideration of the history of the case. The multiformity of the rash, the condition of the glands, and the duration of the disease should determine in a large number of cases the correct diagnosis; to which the history adds confirmatory evidence. In Dr. Janeway's experience syphilis causes more mistakes than other disease except measles. An additional point in the diagnosis is the absence of the eruption on the hands and feet, and in the mouth in cases of syphilitic pustular eruption, otherwise pretty generally distributed over the body.

In speaking of variola and varicella he well remarked that students may be puzzled by finding opposing statements regarding the varicellous eruption, not only in different text-books, but sometimes also in different parts of the same work. The danger in mistaking varicella lies in attending too closely to the eruption, for at times a slight induration is met with at the base of some of the pits of varicella, due to irritation. A careful search will generally show on the back and buttocks, as well as behind the ears, characteristic spots; while in other places the eruption may be more or less altered. In doubtful cases attention should be paid to the cause of the attack, if known, and to the time of the development of the eruption after the patient was taken sick. Dr. Janeway has known of several cases of variola contracted from cases which had been pronounced varicella by careful examiners. In varioloid he had met several cases of varicella-like eruption; so that he believed in making a subdivision of the diseases which should include this, under the head of variola varicelloides.

Typhus fever, when well-marked and with the characteristic eruption, causes little trouble in diagnosis. The earliest cases of an outbreak are, however, not always so well developed, and consequently, the disease may gain headway. In children, particularly, there may be great difficulty in deciding between typhoid and typhus. If we could study a number of cases, we might find the average duration an aid in diagnosis; but this applies more especially to the case of adults. A fever the great number of cases of which terminate (many of them comparatively suddenly) between the eleventh and fourteenth days, should always raise the suspicion of typhus. An autopsy should always be made as a sanitary necessity (should the opportunity occur) to decide the nature of a doubtful outbreak of fever. The lesions of typhoid are characteristic, while those of typhus are in some respects negative; but, in practice, if one of a number of cases of fever which has lasted longer than a week should present, on autopsy, only an enlarged spleen, with minute hæmorrhages on the serous membranes and parenchymatous degeneration of the liver and kidneys, we should feel justified in considering it due to typhus in this climate. Where isolated cases are concerned, it is advisable to examine the intestinal mucosa and the muscles, so that trichinosis may be excluded. We should attach great value to an examination as to the nature of the disease occurring in other inmates of the house, or among the friends of a fever patient, as an early aid in deciding upon the true cause of a case of fever. The neglect of this has often led to serious results. We may admit that typhoid fever may occur with typhus; but, in practice, two or more persons exposed to the same cause of fever should, if becoming sick with a febrile complaint, notwithstanding certain differences in the manifestations, be considered as having the same disease. This is an important point, because, owing to some differences in the eruption and certain minor details, physicians have at times been told that of two members of a family sick, one had typhus, and the other typhoid fever.

The use of antipyrin may cause the appearance of a profuse, measly rash, which may lead the physician in attendance to suppose what he has primarily considered typhoid to be a case of typhus. As regards diarrhœa, all practitioners know that not a few cases of typhoid run their course without it; and, again, it may occur in typhus, although the stools have not the peculiar character of those of typhoid. Typhus fever is not only likely to be considered typhoid, but

also to be mistaken for cerebral inflammation, and particularly for cerebro-spinal meningitis, on account of a peculiar petechial rash in the latter. In doubtful cases optic neuritis, if present, will decide in favor of cerebro-spinal inflammation. But, notwithstanding the fact that Dr. Janeway had had a considerable experience with cerebro-spinal fever, he had not as yet seen a single case in which the rash resembled that of typhus. Moreover, we very frequently meet with herpes of the face and lips in cerebro-spinal disease; but so rarely in typhus and typhoid fevers as practically to amount to an almost pathognomonic sign against these affections, if present in a doubtful case. It may occur in so many other conditions, however, that its presence is of no diagnostic value, except as against the probability of either typhus or typhoid. Flea-bites occurring in typhoid fever have in some cases caused a diagnosis of typhus.

Tuberculosis is a condition which causes not a few mistakes in the diagnosis of typhoid fever, and, at times, of typhus also. Meningitis is so rare a complication of typhus or typhoid that its existence should always raise the suspicion of another process, and more particularly of tuberculosis. If choked disc be found on ophthalmoscopic examination, it will still further increase the probability of this affection. The next step is to ascertain if at any point of the body there is a tubercular lesion accessible to proof or strong suspicion; or if from the previous history there is any probability of such a condition of the lungs. It should be remembered that examination of the lungs in unconscious, and particularly in comatose, conditions is extremely unsatisfactory; and very good examiners have supposed the lungs to be in health when making examinations in such states, while in reality they were the seat of advanced phthisical processes. If decided proof should exist, on examination, that the lungs are the site of disease which, from its position, may be assumed to be tubercular, then it would, with the foregoing facts, be violence to evidence to call the disease typhus or typhoid, unless absolute proof of the presence of one of them could be obtained; as, for example, by the characteristic eruption of typhus.

Some suppose that the finding of bacilli in the sputa will invariably decide the question between typhoid fever and tuberculosis. If the examination be made with care, and every precaution be taken in collecting the sputa to be certain that there is no contamination of the vessel or of the sputa after collection, then the presence of indisputable bacilli would be proof. But if it be supposed that anyone could make the examination and decide, and if the usual manner of collecting sputa be employed, there are undoubtedly chances for error. Again, bacilli might not be found in the sputa, because of lack of care in selecting the proper portions for examination, and in some cases as a result of employing the short method for staining. While Dr. Janeway has been able to make some very good diagnoses by this means, he has met with cases in which phthisis had been diagnosticated from finding a few bacilli; yet the subsequent course of the disease, or an autopsy, disproved the diagnosis. There are certain things which a hasty observer may mistake for bacilli, such as small crystals which appear red as the light is refracted in passing through them, insufficiently decolorized bacteria of other kinds, etc. But both typhus and typhoid fever may coexist with phthisis.

Pyæmia, more particularly that dependent on otitis media and bacterial thrombosis of the lateral sinuses, also causes mistakes in diagnosis, as against typhus and typhoid fever. The reason for this is that, in the unconscious or delirious state in which patients thus affected may come under observation in hospital practice, no mention is made of the old ear trouble, and no examination of the ear is likely to be made. The irregularity of the form, the not infrequent coexistence of meningitis or cerebral abscess, with phenomena more or less suggestive of these conditions, the history or personal observation of suppurative discharge from the ear, and that it had perhaps become foul or been arrested, tenderness or œdema over the mastoid process, and the observation of abscesses in the cellular tissue or of joint inflammation, should at once lead to a probable diagnosis of otitis media. In one case related, the patient being a woman suffering from some fever of doubtful nature, Dr. Janeway found as a useful aid to diagnosis thrombosis of the internal jugular vein, giving a firm feel to the vessel. During a year he has met with three cases of this malady, and in one the thrombosis of the lateral sinus was not of a completely obstructive nature, so that œdema behind the ear was absent. In a suspected case, jaundice will point towards pyæmia or septicæmia, as distinguished from the fevers in which its occurrence is comparatiuely rare; and such jaundice was present in one of the three cases referred to.

## INTERNATIONAL MEDICAL CONGRESS.

In another department may be found "Circular No. 2," concerning the Ninth International Medical Congress, containing important information to the medical profession in this country and abroad. As

it is practically impossible for the Executive Committee to personally give this information to the profession, it is hoped that our exchanges will further the objects and work of the Committee and of the Congress by reprinting the circular.

# SOCIETY PROCEEDINGS.

## MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

*Stated Meeting, Wednesday, April 14, 1886.*

THE VICE-PRESIDENT, W. H. TAYLOR, M.D., IN THE CHAIR.

DR. J. FORD THOMPSON reported a

### CASE OF LITHOTOMY, WITH SPECIMENS.

The case was turned over to him by Dr. Hagner, who had suspected stone from the symptoms.

Wm. M., aged 64, had been suffering from well-marked vesical symptoms for fifteen months, but had been somewhat of a sufferer for a longer time. Examination by sound at once detected stone. He at first intended to do lithotrity, and had enlarged an abnormally small meatus with that operation in view. He found the urethra, however, so small that it would be impossible to pass a good-sized lithotrite, so he abandoned rapid lithotrity. Thinking that the calculus or calculi were small, he decided on the median lithotomy operation. On April 3, assisted by Drs. Hagner, G. W. Johnston and Cutts, the patient was anæsthetized, the bladder washed out and left full of warm water; the grooved staff was passed and the bladder was quickly and easily reached by the median line incision. On passing the stone-forceps a calculus was at once grasped, but it was found to be too large to be drawn out through the opening. A stronger pair of forceps were then introduced and the stone was broken and removed in sections. Other calculi presenting, also too large to be removed with the existing opening, it was enlarged by a lateral incision into the prostate gland. Two large calculi were now removed, with portions of one or two others, which emptied the bladder. There having been very little hæmorrhage and that having stopped, the patient was put to bed, leaving the wound open. The weight of the four calculi was 493 grains. The patient was making an excellent recovery. The urine was voided through the opening, but had been under the control of the patient from the first. Several times he had passed a small quantity of bloody urine by the natural channel, and on two occasions a sound had been passed the same way.

Dr. Thompson said there were two points of especial interest in this case. He had stated some time ago that lithotomy was much less used than formerly, and then chiefly on children. Here was a case where lithotrity was out of the question owing to the unusually small size of the urethra. He did not think that strictures were the cause of this, as there was nothing in the history to give ground for that belief.

The *second* point was the question whether the median or lateral incision should be made. He had been deceived in this case about the size of the stones, as the bladder was so completely contracted around them that he could hardly move the sound about. Most surgeons prefer the lateral incision, but the median was the easiest and in his practice had been followed by the best results. The supra-pubic operation was undoubtedly the best where there was a large stone, and was preferred by many good men when lithotrity was not applicable. Either the median or lateral operation may be followed by impotence; hence they should not be done on young men. In the supra-pubic operation it is absolutely necessary that the bladder be above the pubes. With this in view the bladder is filled with water, or a rubber bulb is introduced and then blown up; and lately he had seen a report where the calculus had been seized by a lithotrite and pushed up against the fundus of bladder. Dr. Thompson does not believe in leaving a catheter in the bladder in any case. He thinks it better to use it as required. In the case reported the temperature had never gone above 101°, and that was on afternoon of day of operation. At present the wound was granulating nicely and a good recovery was certain.[1]

### THE CONSERVATIVE ELEMENT IN DISEASE.

DR. A. F. A. KING recapitulated some of the points considered in his paper read on April 7 (JOURNAL, June 5, p. 636), and proceeded, in accordance with the principles then declared, to present a provisional explanation of the *phenomena of fever* and their utility in contributing to preserve life. During an extensive acute inflammation, a pneumonia for example, which was simply a *non*-traumatic injury made by *in*visible weapons, or during a real traumatic injury made by visible violence, we immediately observed a new appropriation and distribution of nerve force—the appropriation made under normal conditions for maintaining the assimilative and digestive industries was now, as it were, recalled, and expended in repairing the injury. But, as the nervous centres must still be fed, and their functions maintained without interruption, and as metabolism of matter must still be continued to evolve force, disassimilation of fat and muscle (hence "wasting") must take the place of food pabulum. But this tissue-change produces excessive heat, which, however, is reduced by increased frequency of the heart's action, throwing the blood to the skin (which last thus becomes red and hot), and to the pulmonary vesicular mucous membrane (which is 1,400 square feet in area), where, and by which, blood refrigeration may be secured. The respiratory motions, during fever, are also increased in frequency and thus cool air is taken more plentifully into the lungs.

Again, the desires of the fever patient to bathe in and drink cold water, and which must always be con-

[1] April 29. Dr. Thompson reports the above case under this date as being perfectly cured.

sidered a part of the disease, are again designed for blood refrigeration, with other important uses. In brief, the sequence of events may be thus stated:

1. The injury.

2. Anorexia and arrest of digestive industries; arrest of muscular exercise and intellectual labor, the vital forces ordinarily used for these purposes being now appropriated to repair the injury.

3. In the absence of food supply, waste of tissue must be increased to evolve force by which the functions of the nerve centres, heart, etc., may be maintained.

4. Waste of tissue evolves excessive heat.

5. The phenomena (above described) for refrigeration reduce the heat, and so tend to preserve life.

In the hectic fever of consumption, it would probably not be far wrong to consider it as resulting from the (to use a figurative expression) disassimilating kitchens of the body, preparing an evening meal of force and material for the all-important nerve centres. It was questionable whether any of the various pills and mixtures given to relieve hectic fever, in such cases, had prolonged, positively, the lives of consumptives, even if the hectic were controlled by them, which was again doubtful.

If these views, stated tentatively, were correct, it would seem within the range of possibility to forestall the phenomena of fever by injecting nutritive fluids into the veins. Should our manufacturing chemists, who have of late produced so many organic compounds artificially, learn to manufacture a good imitation of *chyle*, and should the ingenuity of our surgeons provide an easy and harmless method of venous infusion, by constructing a sort of artificial *thoracic duct*, to be placed in a vein of the arm, we might then, perhaps, introduce a proper quantity of nutritive pabulum into the blood, two or three times a day, to prevent fever waste and fever heat, and still maintain the functions of the central nervous system. Dr. F. B. Harrington had recently (as we have seen in the journals) introduced on two several occasions, respectively, ℥xxx and ℥xxxvi of a saline solution into the median cephalic vein of a woman almost dead from hæmorrhage, with a favorable result. Why could not an artificial chyle be infused in the same manner?

Dr. King further remarked that the term "disease" embraced so wide a field, and such a vast variety of pathological phenomena, that it would be impossible to present the subject intelligibly and satisfactorily without an entirely new classification of morbid processes and the employment of many new terms. With relation to the want of conservatism in malignant growths, this might be explained by their not being under nervous control. In uterine cancer, for example, after the climacteric, and when it is natural for reproduction and sexual function to cease, the nerves probably atrophy, or suspend for the most part their vaso-motor control, and thus the histological growth in the uterus becomes a histological riot, governed only by "mob law," and without any benign purpose. When the reproductive factory has stopped work, and its offices are empty, the nerve telegraph and telephone are, as it were, taken down, for the sake of economy, and after then any artificially produced growth grows like a fungous excrescence, each cell taking care of itself, without any regard for the laws that respect and protect the entire fabric of the body.

At the very beginning of a study of this sort it could hardly be expected that he, or any one else, should be able, all at once, to explain the conservative influence of many pathological processes of which, at present, we did not even know *positively* the *cause*, which last was the first thing to be learned in order that the utility of the results might be ascertained. All he could hope to accomplish was, to entice the minds of pathologists, students and clinicians into the direction of inquiring, in any case of disease, as to the designed purpose of the observed phenomena. We must ask ourselves: What is this organism trying to do? Why does it do so? What is the use of the changes of function and structure? Are they, or are they not, advisable, *under the circumstances that produce them*, to maintain life? In a word, we must study the *physiology of disease*.

Dr. Bermann said that the question of the conservatism of fever had been under discussion for many years, and that in some cases that was its acknowledged function. Dr. King had, however, left out all mention of the germ theory of disease, as in pneumonia, febris intermittens, etc. If we can take the ground that fever is an effort of the economy to oxidize the germ, well and good, and this appears to be the case in trichinosis, where, after several weeks of high temperature, the trichinæ become surrounded by a deposit of lime and are made harmless. He does not agree with Dr. King as to the value of the hectic fever in phthisis. In his opinion septic fever is the name for it. He also doubts the hypertrophy of the uterine nerves during pregnancy. This has never been proved either as regards size or number of nerves. If they did increase in either way he failed to see how innervation took place. Certainly there was never complete atrophy of them.

Dr. Reyburn said that Dr. King's subject was an interesting one and that he was not alone in his belief. Graves, Bennet and Chambers had all written on this subject. For instance, in pneumonia the fever seemed to he an effort of nature to remove the detritus from tissue waste, and that now it was the custom to feed our patients in fever. If we want to treat our patients on scientific principles it must be more on this line and less pill and physic giving. Fevers must not always be cut short. He thought it well in all societies to discuss these questions and to make our practice more on this basis.

Dr. King said that he was not prepared to explain the conservatism of disease in every case. He had been aware all along that the germ theory of disease would be a stumbling-block, but he hoped that eventually all would be satisfactorily explained. As for pneumonia, which Dr. Bermann had said was from a germ, he did not believe that this had been proved. At all events *he* was not ready to accept it. His assertion that the nerves of the uterus were hypertrophied during pregnancy was obtained from text-books by the best writers and not from his per-

sonal observation. He said he thought it rational to believe that there was hypertrophy of nerves in the hypertrophied muscle of the athlete, and he did not see why the same would not apply to the pregnant uterus.

DR. ACKER said that antipyrin, contrary to Dr. King's assertion that the hectic of phthisis could not be controlled, would bring the temperature of such cases down.

## CHICAGO MEDICAL SOCIETY.

*Stated Meeting, July 19, 1886.*

E. J. DOERING, M.D., PRESIDENT, IN THE CHAIR.

DR. D. A. K. STEELE read a paper on

THE DIFFERENTIAL DIAGNOSIS OF SCROTAL TUMORS.

(See page 173.)

DR. CHRISTIAN FENGER agreed with Dr. Steele that gonorrhœa in itself has nothing to do with tuberculosis; that it will not cause local tuberculosis of the epididymis any more than a trauma will cause local tuberculosis anywhere else in the body. When there is tuberculosis in the body somewhere, and consequently tubercle-bacilli in the current of the blood, then it may be that the local inflammation from gonorrhœal epididymitis, just as extravasation of the blood from a trauma, favors the accumulation of tubercle-bacilli in those places. Occasionally local tuberculosis will commence in an inflamed epididymis, but in a large number of these cases of sorotal tuberculosis there has really been no gonorrhœic epididymitis preceding.

DR. W. T. BELFIELD thought that too much stress had been laid upon the history as a means of differential diagnosis between syphilitic and other enlargements of the testicle; when affirmative, the history is a valuable factor; when negative, the diagnosis must be made without regard to the history. He mentioned a case where there was not only no history of syphilis, but also a nodular enlargement of the epididymis with but slight increase in the size of the testis—features usually characteristic of tuberculosis; yet the patient's age (31) argued so strongly against tuberculosis that it was determined to try syphilitic remedies before proposing excision; the effect was immediate and complete. Primary tuberculosis of the genital organs is evidently an infection from within—hæmatogenous. The idea of local infection through intercourse with a subject of uterine or ovarian tuberculosis is of course fanciful; indeed, very many of these patients are boys just beyond puberty who rarely have had intercourse. The growth of the tubercle bacilli implies some local or general predisposition of the individual; one factor in this predisposition is evidently found in the conditions developed during the rapid growth of a part. Thus in childhood the epiphyses of long bones frequently afford a nidus for the growth of the parasite, while the rudimentary sexual organs are never affected primarily; but when with puberty the genital organs begin a rapid development, they are especially prone to become the site of the infection.

The tuberculous testicle should be excised, provided the prostate and seminal vesicles are apparently healthy, to remove the chances of further infection. While it is of course possible that there may be other and undiscovered foci of infection in various parts of the body—lymphatic glands, lungs or elsewhere—yet castration not only removes one, perhaps the only tuberculous nidus, but especially diminishes the danger of infection of the prostate and seminal vesicles—a necessarily fatal as well as agonizing affection; tuberculosis of the lungs is sometimes arrested by proper climatic and hygienic conditions; but tuberculosis of the prostate never, so far as we know, by either hygienic, medical or surgical means.

DR. MCARTHUR had little to say in regard to the differential diagnosis. In regard to scrotal tumors there was a point upon which he would like to have light, viz.: whether Dr. Fenger would have the Society believe that tubercular testis is always the result of general tuberculosis; that is, that the tubercular bacilli are brought in the blood to the point where the local inflammation occurs. He had privately asked Dr. Belfield if such were the case, what would be the advantage of an early removal? He had removed a testicle that happened to be a tubercular one. The man was 35 years of age, in apparently robust health, with no evidence of pulmonary or kidney affection. Dr. McArthur advised the removal of the testicle and performed the operation. On microscopic examination all the characteristics of tubercular testicle were found; within two months and a half the man died of acute tuberculosis.

DR. CHRISTIAN FENGER said that fifteen years ago nobody would have thought of extirpating a tuberculous testicle, because we knew that after the abscess has opened and discharged for a long time, such persons, if put under favorable circumstances, given cod-liver oil, sent to the seashore or country, will recover. So far as general tuberculosis resulting from a tuberculous testicle was concerned, only about 25 per cent. of the patients, he thought, would become subject to general tuberculosis. In cases where the miliary tubercles were limited to the testicle, and all other parts of the body not as yet invaded, extirpation should be performed. It is a legitimate operation now, but has only become so within the last five years. It of course has to be limited to cases where, so far as we can find out, the tubercle is local in the epididymis. If the tuberculosis has invaded the vas deferens, it is difficult to see what good extirpation of the testicle could do except as a mere local measure. Another point in tuberculosis of the testicle makes us desire if possible to eradicate the local tuberculosis and thereby perhaps prevent the tuberculosis affecting the bladder. The patients are subject to most terrible suffering for a year or two before death when they get tuberculosis of the bladder. He did not think tuberculosis could be called local here except if it could be transmitted by cohabitation with a woman having tubercles of the uterus, much in the same way as the microbes of gonorrhœa are transferred, and this mode of infection is not proved as yet. The tubercles in the epididymis must origi-

nate in the same way as local tuberculosis in the bones, by arresting and accumulation of tubercle bacilli already preëxisting in the general circulation. He did not think it possible that, in the strict sense of the word, any of these tubercles could be called local.

Dr. G. C. Paoli did not claim to be a specialist, but had seen many tumors of the testicles and scrotum. Tumors of the scrotum often arise in connection with diseases of the prostate glands, and with strictures. He had seen tumors of the testicle produced by affections of these organs. Another thing that gives trouble in practice is neuralgia of the testicles, which is very difficult to diagnose because the only symptom we have is the severe pain in the testicle. Another kind of tumor which has not been mentioned is schirrous, and it is often difficult of diagnosis. Many that have been diagnosticated as schirrous have been nothing but chronic orchitis. He once saw a testicle extirpated in the belief that it was schirrous, but it proved to be a case of chronic inflammation of the testicle.

Dr. J. L. Gray read a paper on

THE TREATMENT OF EPILEPSY BY LIGATION OF THE VERTEBRAL ARTERIES,

first proposed by Dr. Brown, of Calcutta, in 1831. Vertebral arteries furnish blood supply of the medulla, pons, cerebellum and posterior third of cerebrum. Real seat of local disease in epilepsy supposed to be in the medulla, especially in the vaso-motor centres and regions related thereto, as convulsive centre described by Nothnagel. Is great irritability of these centres. Attacks of epilepsy due to reflex excitement of these centres. Ligate vertebral arteries and there will be less blood sent to these diseased and hypersensitive centres. Thus is lessened tendency to epileptic seizures. Also, as several branches of the sympathetic nerve must be necessarily ligated at the time the arteries are, this serves to lessen vaso-motor spasm in the medulla. Dr. Gray recommends tying the arteries between the atlas and axis. Operation been performed in Chicago seven times, with benefit in one case, temporary benefit in two, no benefit in two, fatal result in one, and result not known in remainder. Dr. Gray drew the following conclusions: 1. Ligation of vertebral arteries should take its place as a recognized procedure in cases of epilepsy in those cases where causes of attacks come from some region otuside of brain. 2. The artery should be tied as high up as possible and the ligature should include all fibres of the sympathetic nerve accompanying the vessel. 3. When side of brain first invaded by the disease can be determined, the artery of that side should be ligated, and if the lesion be bilateral both vertebral arteries should be ligated. The operation should be done not as a substitute but as an aid to other forms of treatment for the cure or relief of epilepsy.

Dr. D. R. Brower in opening the discussion thanked Dr. Gray for his very able paper so full of interest and scientific importance, and said the case which he reported to the State Medical Society two years ago is now not quite so favorable. Indeed, the child has practically relapsed into the same condition she was at the time of the operation. For two or three months the change for the better in the child's condition was very manifest. In that case the ligation was made at one side, the intention was to have both arteries ligated, but such symptoms of collapse came on that it was deemed unwise to pursue the operation further, and there being so little benefit, the parents refused to have another operation. He thought with Dr. Gray that enough is before us favorable to the operation to recommend it in cases where everything else fails, and he would be disposed to press the operation in those cases where there seems to be some special disorder of the circulation in the medulla. He thought the trouble about the treatment of epilepsy is that we have included under this name a great many diseases, he was sure there are a great many kinds of epilepsy, and he thought we do not know how to differentiate these different kinds, therefore our treatment must be to a great extent imperfect. There seem to to be cases of epilepsy that are confined to the medulla. The history of some cases led him to suppose that the medulla is the seat of the disease, and in such cases it seems that the operation might prove a benefit. He did not believe that the circulation is reëstablished through the circle of Willis nearly so rapidly as Dr. Gray would have us believe. The circle of Willis is made up of minute arteries. In this particular case, there was a manifest and profound impression made upon the area of distribution of the vertebral artery for weeks, and he did not believe the collateral circulation was speedily established. He had no doubt that this operation will do good in some cases, just as any other profound impression will if made upon the nervous system; the cutting and destruction of the connections through the various plexuses is beneficial, so is any extensive counter irritation. A seton added to other treatment that was only partially successful sometimes caused a wonderfully better result to follow. He had a case under observation in which the removal of a cicatrix has resulted in wonderful improvement in the patient's condition, whether due to the extensive counter irritation produced by the operation or removal of cicatrix he did not know. He believed the operation justifiable in cases that resisted the ordinary treatment. He was an earnest advocate of the surgical treatment of epilepsy, the best results he had seen in this disease having followed the use of the surgeon's knife. Quite a number of cases had come under his observation in which the cause of the affection seemed to be in the ovarian region, and surgical interference was followed by better results than from treatment by medicine. He thought the treatment of epilepsy by pills and powders one of the most unsatisfactory things that can be undertaken, and the proportion of cases benefited by drugs exceedingly small.

Dr. Christian Fenger asked as to Alexander's operation, whether he ligated at once on both sides. The first time Dr. Fenger ligated an artery the question presented itself if it would not be dangerous to ligate them both at the same time. He ligated the arteries at Dr. Jewell's request and consequently did not take responsibility for ligating both at once.

That question of course presents itself, and is truly interesting to see that the double simultaneous ligation of the vertebral arteries has never given rise to local brain symptoms. On the other hand, when we ligate a common carotid in case of epilepsy, we always have in mind the danger which may exist of emolition, from local cerebral enemia, and possibly death in a certain number of cases. The operation on the vertebral arteries is far preferable to the ligation of the carotid, if it should prove that there is no danger by the ligature of the vessels both at one time. As to the manner of operating: Alexander operated down low before the artery enters the vertebral canal, but according to Dr. Jewell's view it is necessary to ligate the vertebral arteries high up. I looked over the books of surgery and found that the method of ligating between the occiput and the atlas, and between the latter and the epistrofous, had been done on the cadaver, but not on living subjects. The reason why the vertebral artery had been ligated in former times was either for aneurism or wounds. There are very few instances on record, and the wounds and aneurisms were very dangerous cases, and Fischer in the German surgery of Billroth and Lurcke, published in 1880, said that the ligature of the vertebral artery between the occiput and atlas and between the atlas and the axis is practically impossible. On the cadaver it can be done as well between the occiput and atlas as the atlas and axis, but the operation is much easier between the atlas and axis. To ligate between the occiput and the atlas I consider almost practically impossible on the living subject. The ligature between the atlas and the axis can be done; I know that Andrews ligated there, but the cases on record are few. There has not as yet been any injury to the artery, but if we should tear the artery so that we could not get hold of vessel enough to ligate above and below, we would have much the same condition as in a traumatic aneurism of the artery. Warren, of Boston, who wrote his Memoirs of Surgery twenty years ago, gives one case of wounded artery that got well by compression, by filling up the wound, but in most cases we know how little effective the plugging of an arterial wound is. Of thirty-four wounds of the vertebral artery only five recovered. Four of these were treated by plugging or local applications; in one only the ligature between occiput and atlas was performed by me in 1881, and the case published in *Gaillard's Journal*, July, 1882. Dr. Fenger was afraid when taking up the vertebral artery of the possibility of wounding it before it is ligated.

DR. C. W. PURDY asked Dr. Gray whether the operation was followed by diabetes, as would be expected from an operation of that kind. It was pointed out in 1849 by Claude Bernard, that traumatic injuries to this tract of the brain gives rise to diabetes in numerous instances, and since that time the course of the diabetic influence has been pretty satisfactorily mapped out. It is said to leave the brain by vaso-motor filaments with the vertebral arteries going as far as the third cervical ganglion, passing along with and surrounding the subclavian arteries, and reaching the upper and middle dorsal. A section of these nerves at any place until we reach the upper dorsal ganglion causes diabetes. Strange to say, section of the splanchnics does not cause diabetes, but he would expect to find traumatic diabetes as a result of this operation. He thought that diabetes as a result of the operation would be only temporary.

DR. HAROLD N. MOYER thanked Dr. Gray for the manner in which he had presented the subject and especially for the indications which he laid down for the operation. Dr. Moyer had uniformly bad results from the treatment of epilepsy by any operative proceedure. He had never recommended an operation for trephining that was followed by good results. He had once recommended the removal of the ovaries, and it was done, but was not followed by a good result. In one case coming under his observation a man was trephined three times; the first time it was followed by a cessation of the epilepsy for eighteen months; the second, for a year; the last, by no cessation. He had found medication quite as bad; he had tried the bromides according to Hammond's method, without good results. During the last two years he had treated about one hundred cases of epilepsy and in only one case had there been any real benefit. He thought he should recommend this operation, and hoped it might not be as serious as one would be led to suppose from the deep seat of the artery, and the extensive destruction of tissue that must be made to reach it.

DR. D. R. BROWER said that at the discussion which followed his paper at Springfield, a gentleman present announced that this operation was first performed in this country sixty years ago by an army surgeon, stationed in St. Louis, upon a negro man who was his servant. The man recovered, but the case was never published. If this is so, an American surgeon was the first to essay the operation.

DR. J. L. GRAY in closing the discussion said that he had not had an opportunity, except in one case, to examine the urine, and in that there was a slight quantity of sugar for about a week. From all the literature he was able to examine the first operation was performed in 1831 by Dr. Brown.

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## CHICAGO GYNÆCOLOGICAL SOCIETY.

*Forty-Seventh Regular Meeting, Friday Evening, May 28, 1886.*

THE PRESIDENT, DANIEL T. NELSON, M.D., IN THE CHAIR.

W. W. JAGGARD, M.D., EDITOR.

### TAIT ON ABDOMINAL SECTION FOR PELVIC ABSCESS.

The Secretary, Dr. Edward Warren Sawyer, read the following letter from MR. LAWSON TAIT:

*My Dear Dr. Nelson:*—If not too late, I should like to take part in the discussion which was entered into at the Gynæcological Society of your city upon "Abdominal Section for Pelvic Abscess." My remarks, of course, are discursive and not very conclusive, because they are based upon only a very few points to which I want to draw attention.

The first is this: I object to the use of words ending in *otomy*, to mean various operations all of which are practically identical in character but different in detail, and not one of which can have any exclusive or absolute identification by any particular name. Thus Professor Christian Fenger, in the discussion, objects to the word laparotomy, and he introduces another which is perfectly new to me, and I hope it will never be used again: it is *oncotomy*. Dr. Fenger objects to laparotomy in a sense where I certainly have no objections, and his very objections only show how utterly absurd all these words are. There really ought not to be any such word as laparotomy in existence, because the signification of its derivatives in the use of the people who spoke the language is such that it could not by any human ingenuity be applied to any modern surgical proceeding. Now the words "abdominal section" are sufficiently English to be understood by everybody, and they are sufficiently distinctive to enable us to understand at once that when they are used the peritoneum is opened. I therefore wish through your powerful society to protest against the use of all these stupid words of Greek formation. I wish also to protest against the absurd distinctions drawn by Sanger which are quoted by Dr. Fenger on the subject of pelvic abscess.

He distinguishes six kinds of salpingitis.

1. *Septic*, the existence of which I entirely dispute as a specific ailment.

2. *Tuberculous*, which again I deny except that it has an existence as the third and contracting stage of pyosalpinx.

3. *Syphilitic*, not one particle of evidence of this have I ever seen.

4. *Actino-Mycotic*, which is an equally ridiculous subdivision, based on mere theory, not on fact.

5. *Gonorrhœal*, to which a great bulk of the cases belong.

6. *A mixed form.* Instead of this sixth or mixed form, I would say that there are a great many cases to which we cannot attribute any actual origin, a number of cases occurring in virgins where the existence of gonorrhœa would be an impossibility, and where there was no puerperal mischief.

Dr. Fenger's paper has always seemed to me to be an illustration of the German savant evolving the descriptions of the camel out of his own consciousness. My descriptions, on the other hand, are taken from some hundreds of cases upon which I have performed operations and the history of which I know as completely as it is possible to obtain information.

In Dr. Reeves Jackson's paper there are two points to which I want specially to draw attention, and they are not of much importance because they are chiefly questions personal to myself.

The first is a passage in which it is said: "Lawson Tait, of Birmingham, and Martin, of Berlin, were the first who attempted to prevent the terrible contingencies of pelvic inflammations by attacking the disease at its original seat. Lawson Tait removed the suppurating uterine appendages, Martin operated for suppurating periuterine hæmatocele. Tait operated for a suppurating hæmatoma of the right Fallopian tube in 1878, and he removed both tubes for pyosalpinx, and an ovary for abscess in 1885. In 1885 Martin performed laparotomy in three cases of intraperitoneal hæmatoma, namely, retrouterine hæmatocele." Now accuracy of date in a matter of this kind is rather important for one's own personal reputation, and Professor Reeves Jackson has underestimated my claim for priority by at least seven years. The first operation which I performed for suppuration of the uterine appendages was done on the 11th of February, 1872, and there will be found in the last edition of my book on "Diseases of the Ovaries," twenty-two cases which I had performed up to the middle of August, 1882, without a death. Since then I have operated upon hundreds. The first case of suppurating hæmatocele which I operated upon is published in detail in the same book; it was in February, 1879, and since then I have operated upon thirty-two cases without a death, and all have been completely cured. It will thus be seen that in none of these matters have the German surgeons approached English surgery as rivals in priority. They have been mere followers in every particular, and I regret to say their following has been practiced without that recognition to which our priority gives us every just claim.

The second point is that in which I find Professor Byford speaking in terms of my own work which no words of mine can sufficiently recognize or express my appreciation of, and here certainly his words of caution are worthy of a little note. What I fear, in fact what I already feel, is that the remarkable success which I have had, and of which Professor Byford speaks in such strong terms, is really leading astray those whose opportunities have not been as my own, into the belief that the work is easy, simple, easily acquired and free from risk. It is not so, and unless those who practice it choose to follow me in the rigid precautions and immense care which I give, not only to the mere performance of the operation, but to the surroundings of my patients and to every detail in connection with them, they will not obtain, they must not expect, the success which I have had. I have said that I fear, in fact, I already feel, that this success of mine is leading people astray, and I want to urge in the name of humanity, as well as for the sake of the art we practice, that there should be less of the indiscriminate rushing into this kind of work which has already been deplored on both sides of the Atlantic. I am, etc., LAWSON TAIT.

7, The Crescent, Birmingham, April 14, 1886.

DR. A. REEVES JACKSON said: We ought, I am sure, to feel honored by having among us in spirit, if not in person, so eminent a man as the writer of this letter. Lawson Tait is in some respects the greatest living surgeon, a Gamaliel at whose feet we all find ourselves sitting; and, withal, a man so observant that not a single gynæcological sparrow falls in any part of the world unnoticed by him. I must plead "not guilty" to the charge—made against me by Mr. Tait—of inaccuracy regarding the date of his first laparotomy for pelvic abscess—the remarks upon this point having been made by another, and not by me. As stated in the letter, his first operation of

this nature was done February 11, 1872, at Birmingham, on a patient of Mr. Hallwright. I am sure that Mr. Tait will not for a moment suppose that any of us would willingly do injustice to one whom we all esteem so highly, and from whom many of us have been recipients of acts of kindness and courtesy.

In regard to the justice of Mr. Tait's criticism on the prevalent use of the words ending in "otomy" I do not feel like being an arbiter. Technical words are frequently necessary, and yet, as a general rule, I think it preferable to use simple language. The ordinary English words are commonly sufficient to answer all the purposes of language. Besides, large and unusual words are sometimes embarrassing. When, some weeks ago, Professor Fenger charged me with performing an "oncotomy" I was afraid that I had done something very dreadful, and the worse because I did it without knowing it. I felt very much as the fisherwoman did when Daniel O'Connell in response to her volley of ordinary, undecorated profanity called her a parallelogram. The fisherwoman did not know what to say, and I could not reply; we both had evidently lost the thread of the discussion. I am glad that Mr. Tait speaks so strongly in regard to the tendency now so frequently indulged in, to perform laparotomies, and that he is willing to correct to some extent by his words the mischief that has been done by his powerful and successful work. It seems that when some persons visit Mr. Tait and witness his success and simple but effective methods, they come back thinking life is a blank unless they can own and manage an abdominal hospital and spend the remainder of their days in the cheerful occupation of removing uteri and ovaries.

DR. CHRISTIAN FENGER said: The letter which Mr. Lawson Tait wrote to Dr. Nelson relates in a number of points to my paper on "Laparotomy for Periuterine Abscess," as well as to some remarks which I made before the Society in a previous discussion. I must, therefore, beg the Fellows of the Society to bear with me if I take up a little of their time in answering Mr. Tait's letter.

Discussing Professor A. Reeves Jackson's paper, I objected to calling the operation in question a laparotomy. According to the Professor's description of the case, he had opened an abscess which was adherent to the anterior abdominal wall. He had consequently simply performed an oncotomy, an operation which, notwithstanding the division of the abdominal wall, does not differ materially from opening a deep-seated abscess in any other region of the body, as *ex. gr.* in an extremity.

Whether opening the abdominal or peritoneal cavity be termed laparotomy or abdominal section or *Bauch-Schnitt*, is of course a matter of indifference, provided only that the meaning of the word be agreed upon. There is but one way of getting at the signification of a medical term, and that is by learning in what sense the term is employed in the medical literature of the different nations.

I must again maintain that laparotomy is not merely section of the abdominal parietes, but that the word implies opening of the general peritoneal cavity with a view to perform some operation within that cavity. (*See Linhardt's Operationslehre.* Wien 1862, p. 705 and *Eulenburg, Realencyclopædie*, Bd. II, p. 37.) French authors occasionally use the word gastrotomy instead of laparotomy. Recently the operation has been called peritonotomy, which on account of its correctness should perhaps be preferred to the other terms.

It is of importance to distinguish between a laparotomy and the evacuation of a limited abscess by simply incising the abdominal wall. The two operations differ widely as to their consequent dangers. Where the general peritoneal cavity is opened, a well-known series of precautionary measures is required before and during the operation, in order to protect the patient from general septic peritonitis.

Where an incision through the abdominal parietes leads directly into a limited abscess-cavity, the precautionary measures essential to laparotomy may be dispensed with; the general peritoneal cavity is not opened and there is no fear of general peritonitis. In the latter operation the peritoneum is not seen or not taken notice of, the incision wound is left open and the limited cavity washed out and drained.

In every country medical authors hold these two operations apart. Opening a perityphlitic abscess, an adherent hepatic abscess or a parametritic abscess above Poupart's ligament is never spoken of as a laparotomy. Whenever we hear or read of a man having performed a series of laparotomies we naturally suppose that he is experienced in performing intraperitoneal operations. Now, many a surgeon has opened a large number of intraabdominal abscesses and has never seen the peritoneal cavity.

It is evidently important properly to limit the meaning of the term laparotomy; else we may misunderstand the description of a given case, and the statistics of laparotomies will necessarily be rendered valueless.

The next point Mr. Lawson Tait remarks upon is the question of priority of operating for pelvic hæmatocele. By the mistake of Mr. Tait, part of what I said in the discussion of Professor Jackson's paper is ascribed to the paper itself. I am thus quoted in his letter:

"Lawson Tait, of Birmingham, and Martin, of Berlin, were the first who attempted to prevent the terrible consequences of pelvic inflammations by attacking the disease at its original seat. Lawson Tait removed the suppurating uterine appendices; Martin operated for suppurating periuterine hæmatocele."

In the discussion I stated the dates at which Tait and Martin performed their respective operations. By a typographical error the dates appeared wrong in some of the copies of the transactions of the Society. 1885 instead of 1872 was given as the date of Tait's first laparotomy for abscess of the ovary, and 1885 instead of 1876 as that of Martin's first laparotomy for extraperitoneal hæmatocele.

Considering my remarks as a whole and examining my references to the literature on the subject a careful reader would not have failed to recognize in the wrongly printed dates a typographical error.

Lawson Tait performed his first laparotomy for

extraperitoneal hæmatocele in February 1879. (See Lawson Tait: *Diseases of the Ovaries. 4th Edition. London 1883, p. 346, and Tait's letter.)*

Martin performed the same operation for the first time in 1877, and a second time on the 31st of January, 1879. (See A. Martin: *Das extraperitoneale periuterine Hæmatom. Zeitschrift für Geburtshülfe und Gynekologie. VIII Bd. Hft. II, 1882, p. 476.)*

It will thus be seen that my statements concerning priority were correct. In the discussion of Professor Jackson's paper I quoted Sänger's classification of pelvic inflammations. In criticising it, Mr. Lawson Tait speaks of "absurd distinctions." I wish to repeat that I regard Sänger's classification as complete and correct and in accordance with the laws governing inflammatory processes in all organs of the body.

To Mr. Lawson Tait's manner of criticising my little paper "On Chronic Periuterine Abscess and its Treatment by Laparotomy," which appeared in the May number of the *Annals of Surgery*, 1885, there is but one answer. Like all published articles it is open to criticism. If anybody should wish to attack it, I am ready to enter into a discussion of it, provided that tangible objections to it be brought forward.

*(To be concluded.)*

## INTERNATIONAL CONGRESS.

### NINTH INTERNATIONAL MEDICAL CONGRESS TO BE HELD IN WASHINGTON, D.C., COMMENCING SEPT. 5, 1887.

CIRCULAR NO. 2.

The Ninth International Medical Congress will assemble in the City of Washington, the Capital of the United States, on Monday, September 5, 1887, at 12 o'clock noon, in accordance with the arrangements made at Copenhagen in August, 1884.

*Patrons.*—The President of the United States, the Hon. Grover Cleveland; the Secretary of State, the Hon. Thomas F. Bayard; the President of the Senate of the United States, the Hon. John Sherman; the Speaker of the House of Representatives of the United States, the Hon. John G. Carlisle.

PROPOSED OFFICERS OF THE CONGRESS.

*President.*—Nathan S. Davis, M.D., LL.D,, Professor of the Principles and Practice of Medicine and of Clinical Medicine, Chicago Medical College, and of Mercy Hospital, Chicago, Illinois.

*Vice-Presidents, as far as appointed.*—McCall Anderson, M.D., London, England; Mr. Thomas Annandale, Professor of Clinical Surgery, Edinburgh University, Edinburgh, Scotland; Professor Dujardin-Beaumetz, M.D., Paris, France; Cuthbert Hilton Golding-Bird, M.D., Professor of Physiology, Guy's Hospital, London, England; Professor Carl Braun, M.D., Vienna, Austria; William Brodie, M.D., Emeritus Professor of Principles and Practice of Medicine and Clinical Medicine, Detroit College of Medicine, Detroit, Michigan; W. W. Dawson, M.D., Professor of Surgery and Clinical Surgery, Medical College of Ohio, Cincinnati, Ohio; Thomas M. Dolan, M.D., Halifax, England; F. R. Frazer, M.D., Professor of Materia Medica and Therapeutics, University of Edinburgh, Edinburgh, Scotland; J. A. Grant, M.D., Ottawa, Canada; J. A. S. Grant, M.D., Cairo, Egypt; A. L. S. Gusserow, M.D., Professor of Obstetrics, Berlin, Prussia; Dr. Hans Ritter von Hebra, Vienna, Austria; Dr. E. Klein, London, England; M. Le Baron H. Larrey, Paris, France; Sir William MacCormac, Surgeon St. Thomas's Hospital, London, England; Mr. George B. MacLeod, Professor of Surgery, Glasgow, Scotland; John S. McGrew, M.D., Honolulu, Hawaiian Islands; E. M. Moore, LL.D., Rochester, New York; Professor von Monseil, Bonn, Prussia; Dr. Müller, Berlin, Prussia; William Murrell, M.D., London, England; Charles D. F. Phillips, M.D., M.R.C.S., late lecturer on Materia Medica and Therapeutics, Westminster Hospital, London, England; Richard Quain, M.D., Professor of Anatomy, London, England; Tobias G. Richardson, M.D., Professor of General and Clinical Surgery Medical Department Tulane University, New Orleans, Louisiana; M. P. Ricord, Paris, France; Professor John Burdon-Sanderson, M.D., London, England; Lewis A. Sayre, M.D., Professor of Orthopædic and Clinical Surgery, Bellevue Hospital Medical College, New York; Dr. Mariano Semmola, Professor of Experimental Therapeutics, University of Naples, Italy; Dr. Leopold Servais, Antwerp, Belgium; J. M. Toner, M.D., Washington, D.C.; Dr. P. G. Unna, Hamburgh, Germany; Professor F. Winckel, Dresden, Saxony; the President of the American Medical Association; the Surgeon-General of the United States Army; the Surgeon-General of the United States Navy.

*Secretary-General.*—John B. Hamilton, M.D., Supervising Surgeon-General of the United States Marine Hospital Service; Professor of Surgery, Georgetown University, D. C.; Professor of Surgery, Chicago Policlinic.

*Treasurer.*—E. S. F. Arnold, M.D., M.R.C.S., Newport, Rhode Island.

*Chairman of the Finance Committee.*—Richard J. Dunglison, M.D., Philadelphia, Pennsylvania.

*Chairman of the Executive Committee.*—Henry H. Smith, M.D., LL.D., Emeritus Professor of Surgery in the University of Pennsylvania, Philadelphia, Pennsylvania.

*Chairman of the Committee of Arrangements.*—A. Y. P. Garnett, M.D., Emeritus Professor of Clinical Medicine, Columbia University, Washington, D.C.

*Associate Secretaries of the Congress.*—William B. Atkinson, M.D., Philadelphia, Pennsylvania; G. B. Harrison, M.D., Washington, D.C.

The Congress will consist of such members of the Regular Medical Profession as shall have registered and taken out their ticket of admission, and of such other Scientific men as the Executive Committee of the Congress shall deem it desirable to admit. The books for the Registration of Members will be open from 9 A.M. to 5 P.M. on Thursday, September 1, 1887, and on each subsequent day during the Session, under the charge of the "*Reception Committee.*" Any member desiring to anticipate this Registration, can apply by letter to the Secretary-General and forward

his dues, with his address in full, when a receipt will be returned.

The dues of Membership for residents of the United States will be Ten dollars ($10). There will be no dues for members residing in other countries. Each member will be entitled to receive a copy of the "*Transactions*" of the Congress, when published by the Executive Committee.

The General Sessions of the Congress will be devoted to the transaction of business and Addresses and communications of general scientific interest, by members appointed by the Executive Committee. A printed "Programme" of the Sessions will be presented to each member on registering. A printed "Order of Business" for each day will also be issued.

The work of the various Sections will be directed by the President of the Section, and the order will be published in a daily Programme for each Section. Questions and topics that have been agreed on for discussion in the Sections shall be introduced by members previously designated by the titular officers of each Section. Members who have been appointed to open discussions shall present to the Secretaries of the Section, in advance, statements of the conclusions which they have formed as a basis for the debate.

Brief abstracts of Papers to be read in the Sections shall be forwarded to the Secretaries of the proper Section on or before *April 30, 1887*. These abstracts shall be treated as confidential communications, and shall not be published before the meeting of the Congress. Papers relating to topics not included in the list of subjects proposed by the Officers of the Sections, may be accepted after April 30, 1887, and any member wishing to introduce a topic not on the regular list of subjects for discussion, shall give notice of the same to the Secretary General at least twenty-one days before the opening of the Congress. The titular officers of each Section shall decide as to the acceptance of such proposed communications, and the time for their presentation. No communitions shall be received which has been already published or read before a Society.

The official languages of the Congress shall be English, French and German. Each paper or address shall be printed in the "*Transactions*" in the language in which it was presented. Preliminary abstracts of papers and addresses shall also be printed in the language in which each is to be delivered. All discussions shall be printed in English.

The officers of the Congress and the officers of the Sections, including all Foreign officers, will be nominated to the Congress by the Executive Committee, at the opening of the first Session. A partial list of the officers to be nominated (except the members of Council of the different Sections, the list of whom is at present imperfect), is offered herewith.

The Executive Committee cordially invites members of the regular medical profession, and men eminent in the sciences collateral to medicine, in all countries, to participate, in person or by papers, in the work of this great humanitarian assembly. Communications relating to appointments for papers to be read in the Congress should be addressed to Dr. John B. Hamilton, Secretary-General of the Ninth International Medical Congress, Washington, District of Columbia. All questions or communications connected with the business of the Executive Committee should be addressed to Dr. Henry H. Smith, Chairman of the Executive Committee of the Ninth International Medical Congress, Philadelphia, Pennsylvania. Gentlemen named in any position in the Congress are requested to notify the Chairman of the Executive Committee, as soon as practicable, of any error in the name, title or address in this circular.

Ladies in attendance with members of the Congress, and those invited by the "Reception Committee," may attend the General Sessions of the Congress when introduced by a member. They will also be invited to attend the Social Receptions. The Executive Committee reserves the right to invite distinguished persons to any or all the meetings of the Congress. The attendance of Medical Students and others interested in the work of the various Sections or in the general addresses delivered in the Congress, will be permitted, on the recommendation of the Secretary-General or the officers of a Section, on their taking out from the Registration Committee a general ticket of admission, fee one dollar ($1); but such persons cannot take part in the proceedings.

All communications and questions relating to the special business of any Section, must be addressed to the President or one of the Secretaries of that Section. As many details of the Congress and numerous appointments of officers are yet to be completed, other Circulars will be issued from time to time, as circumstances may demand.

The following is the list, as at present completed:

### EXECUTIVE COMMITTEE OF THE CONGRESS.

Henry M. Smith, M.D., LL.D., *Chairman;* N. S. Davis, M.D., LL.D.; John B. Hamilton, M.D.; E. S. F. Arnold, M.D.; Richard J. Dunglison, M.D., *Secretary;* Abram B. Arnold, M.D.; William T. Briggs, M.D.; De Laskie Miller, M.D., Ph.D.; James F. Harrison, M.D.; F. H. Terrill, M.D.; William H. Pancoast, M.D.; John H. Callender, M.D.; Alonzo B. Palmer, M.D., LL.D.; J. Lewis Smith, M.D.; E. Williams, M.D.; S. J. Jones, M.D., LL.D.; William H. Daly, M.D.; A. R. Robinson, M.D.; Joseph Jones, M.D.; Albert L. Gihon, M.D.; John P. Gray, M.D., LL.D.; Jonathan Taft, M.D.; Frederick S. Dennis, M.D.; A. Y. P. Garnett, M.D.

### PRESIDENTS OF SECTIONS.

*General Medicine.*—Abram B. Arnold, M.D., Professor of Clinical Medicine, College of Physicians and Surgeons, Baltimore, Md.

*General Surgery.*—William T. Briggs, M.D., Professor of Surgery, University of Nashville, Nashville, Tenn.

*Military and Naval Surgery and Medicine.*—Henry H. Smith, M.D., LL. D., Emeritus Professor of Surgery, University of Pennsylvania, and formerly Surgeon-General of Pennsylvania, Philadelphia, Pa.

*Obstetrics.*—DeLaskie Miller, M.D., Ph. D., Professor of Obstetrics, Rush Medical College, Chicago, Ill.

*Gynæcology.*—James F. Harrison, M.D., Professor of Obstetrics, etc., University of Virginia, Va.

*Therapeutics and Materia Medica*—F. H. Terrill, M.D., Professor of Therapeutics, University of California, San Francisco, Cal.

*Anatomy.*—William H. Pancoast, M.D., Professor of General, Descriptive and Surgical Anatomy, Medico-Chirurgical College, Philadelphia, Pa.

*Physiology.*—John H. Callender, M.D., Professor of Physiology and Psychology, University of Nashville, Nashville, Tenn.

*Pathology.*—Alonzo B. Palmer, M.D., LL. D., Professor of Pathology, University of Michigan, Ann Arbor, Mich.

*Diseases of Children.*—J. Lewis Smith, M.D., Professor of the Diseases of Children, Bellevue Hospital Medical College, New York, N. Y.

*Ophthalmology.*—E. Williams, M.D., Professor of Ophthalmology, Miami Medical College, Cincinnati, Ohio.

*Otology.*—S. J. Jones, M.D., LL.D., Professor of Ophthalmology and Otology, Chicago Medical College, Chicago, Ill.

*Laryngology.*—William H. Daly, M.D., Pittsburg, Pa.

*Dermatotogy and Syphilis.*—A. R. Robinson, M. D., Professor of Dermatology, New York Polyclinic, and of Histology and Pathological Anatomy, Woman's Medical College of the New York Infirmary, New York, N. Y.

*Public and International Hygiene.*—Joseph Jones, M.D., Professor of Chemistry and Clinical Medicine, Tulane University; Ex-President Board of Health, New Orleans, La.

*Medical Climatology and Demography.*—Albert L. Gihon, M.D., Medical Director, U. S. Navy.

*Psychological Medicine and Nervous Diseases.*—John P. Gray, M.D., LL.D., Professor of Psychological Medicine and Medical Jurisprudence, Bellevue Hospital Medical College, Utica, N. Y.

*Dental and Oral Surgery.*—Jonathan Taft, M.D., Professor of Dental and Oral Surgery, University of Michigan, Ann Arbor, Mich., Cincinnati, Ohio.

VICE-PRESIDENTS OF SECTIONS.

*General Medicine.*—W. W. Cleaver, M.D., Kentucky; J. A. Octerloney, M.D., Kentucky; P. G. Robinson, M.D., Missouri; Thos. F. Rochester, M.D., New York; Preston B. Scott, M.D., Kentucky.

*General Surgery.*—Professor Filanus, Holland; Moses Gunn, M.D., Illinois; J. W. Hamilton, M. D., Ohio; W. H. Hingston, M.D., Canada; James M. Holloway, M.D., Kentucky; J. C. Hutchison, M.D., New York; N. S. Lincoln, M.D., District of Columbia; Donald MacLean, M.D., Michigan; Donald Macrea, M.D., Iowa; M. Storrs, M.D., Connecticut.

*Military and Naval Surgery and Medicine.*—C. J. Cleborne, M.D., United States Navy; E. H. Gregory, M.D., Missouri; Frank H. Hamilton, M.D., New York; W. T. Hord, M.D., United States Navy; Frederick Hyde, M.D., New York; G. L. Porter, M.D., Connecticut; Wm. E. Taylor, M.D., United States Navy; Edward Warren-Bey, M.D., France; B. A. Watson, M.D., New Jersey.

*Obstetrics.*—Gustav Braun, M.D., Austria; P. Budin, M.D., France; J. Galabin, M.D., England; John Goodman, M.D., Kentucky; W. M. Knapp, M.D., Nebraska; R. Lowry Sibbet, M.D., Pennsylvania; Isaac E. Taylor, M.D., New York.

*Gynæcology.*—N. Bozeman, M.D., New York; Henry O. Marcy, M.D., Massachusetts; T. A. Reamy, M.D., Ohio; R. R. Storer, M.D., Rhode Island.

*Therapeutics and Materia Medica.*—Henry M. Field, M.D., New Hampshire; Albert Fricke, M.D., Pennsylvania; George Gray, M.D, Ireland.

*Anatomy.*—C. W. Kelly, M.D., Kentucky; Samuel Logan, M.D., Louisiana.

*Physiology.*—

*Pathology.*—Andrew Fleming, M.D., Pennsylvania; J. B. Johnson, M.D., Missouri; Henry F. Lyster, M.D., Mich.

*Diseases of Children.*—William B. Atkinson, M.D., Pennsylvania; William G. Booker, M.D, Maryland; William H. Day, M.D., England; Dr. Cadet de Gassicourt, France; Dr. J. Grancher, France; Dr. Edward Henoch, Prussia; Adoniram B. Judson, M. D., New York; J. P. Oliver, M.D., Massachusetts; Eustace Smith, M.D., England; Charles West, M. D., England; Joseph E. Winters, M.D., New York.

*Ophthalmology.*—A. W. Calhoun, M.D., Georgia; J. J. Chisholm, M.D., Maryland; P. D. Keyser, M. D., Pennsylvania; Dudley S. Reynolds, M.D., Ky.

*Otology.*—

*Laryngology.*—M. F. Coomes, M.D., Kentucky; J. H. Hartman, M.D., Maryland; J. O. Roe, M.D., New York; E. L. Shurley, M.D., Michigan; G. V. Woolen, M.D., Indiana.

*Dermatology and Syphilis.*—James M. Keller, M. D., Arkansas; John V. Shoemaker, M.D., Pennsylvania; George Thin, M.D., London, England.

*Public and International Hygiene.*—A. Nelson Bell, M.D., New York; John Berrien Lindsley, M. D., Tennessee; J. N. McCormack, M.D., Kentucky; J. F. Y. Paine, M.D., Galveston, Texas; Benjamin W. Richardson, M.D., England; John Simon, M.D., England; J. W. Thudicum, M.D., England.

*Medical Climatology and Demography.*—Dr. A. Chervin, Paris, France; Traill Green, M.D., Pennsylvania; John H. Hollister, M.D., Illinois.

*Psychological Medicine.*—Julius Althaus, M.D., England; R. H. Chase, M.D., Pennsylvania; Eugene Grissom, M.D., North Carolina; John C. Hall, M.D., Pennsylvania; P. A. Hooper, M.D., Arkansas; J. S. Jewell, M.D., Illinois; S. S. Schultz, M.D. Pennsylvania.

*Dental and Oral Surgery.*—W. W. Allport, M.D, Illinois; S. W. Dennis, M.D., California; C. L. Ford, M.D., Michigan; H. L. McKellops, M.D., Missouri; A. T. Metcalf, M.D., Michigan; W. H. Morgan, M.D., Tennessee; A. L. Northrop, M.D., New York; L. D. Shepard, M.D., Massachusetts.

SECRETARIES.

*General Medicine.*—J. W. Chambers, M.D., Baltimore, Maryland.

*General Surgery.*—Dudley P. Allen, M.D., Cleveland, Ohio; Carl Mayde, M.D., Germany; J. R. Weist, M.D., Richmond, Ind.; A. H. Wilson, M.D., South Boston, Mass.

*Military and Naval Surgery and Medicine.*—J. McF. Gaston, M.D., Atlanta, Georgia; E. A. Wood, M.D., Pittsburg, Pa.

*Obstetrics.*—A. Charpentier, M.D., Paris, France; T. Felsenreich, M.D., Vienna, Austria; W. W. Jaggard, M.D., Chicago Ill.; John Williams, M.D., London, Enland.

*Gynæcology*—Earnest W. Cushing, M.D., Boston, Mass.

*Therapeutics.*—Frank Woodbury, M.D., Philadelphia, Pa.

*Anatomy.*—Henry Morris, M.D., Philadelphia, Pa.

*Physiology.*—R. W. Bishop, M.D., Chicago, Ill.

*Pathology.*—H. M. Biggs, M.D., New York, N.Y.; I. N. Himes, M.D., Cleveland, Ohio.

*Diseases of Children.*—Dillon Brown, M.D., New York.

*Ophthalmology*—S. C. Ayres, M.D., Cincinnati, Ohio.

*Otology.*—S. O. Richey, M.D., Washington, D.C.

*Laryngology.*—William Porter, M.D., St. Louis, Missouri.

*Dermatology.*—W. T. Corlett, M.D., Cleveland, Ohio; F. E. Daniel, M.D., Austin, Tex.

*Public and International Hygiene.*—George H. Rohé, M.D., Baltimore, Md.; Walter Wyman, M.D., U. S. Marine Hospital Service, New York, N. Y.

*Climatology and Demography.*—Charles Denison, M.D., Denver, Colorado; James F. Todd, M.D., Chicago, Illinois.

*Psychological Medicine.*—E. D. Ferguson, M.D., Troy, N. Y.; E. Landolt, M.D., (Berlin, Prussia), Paris, France.

*Dental and Oral Surgery.*—Edward A. Bogue, M.D., New York, N. Y.; S. F. Rehwinkle, M.D., Chillicothe, Ohio.

COMMITTEE OF ARRANGEMENTS, WASHINGTON, D. C.

A. Y. P. Garnett, M.D., Chairman; J. M. Toner, M.D., Vice-Chairman; C. H. A. Kleinschmidt, M.D., Secretary; D. C. Patterson, M.D., Treasurer.

*Executive Committee.*—Drs. A. Y. P. Garnett, J. M. Toner, N. S. Lincoln, C. H. A. Kleinschmidt, Surgeon-General F. M. Gunnell, M.D., U. S. Navy; Surgeon-General Robert Murray, M.D., U. S. Army; Supervising Surgeon-General J. B. Hamilton, M.D., U. S. Marine Hospital Service; Chief Medical Purveyor J. H. Baxter, M.D., U. S. Army.

*Committee on Congressional Legislation.*—Dr. A. Y. P. Garnett, Chairman.

*Committee on Finance*—Dr. G. L. Magruder, Chairman.

*Committee on Printing.*—Dr. J. B. Hamilton, Chairman.

*Committee on Reception.*—Dr. J. M. Toner, Chairman.

*Committee on Entertainments.*—Dr. N. S. Lincoln, Chairman.

*Committee on Transportation.*—Dr. J. W. H. Lovejoy, Chairman.

*Committee on Place of Meeting for Congress and Sections*—Dr. D. C. Patterson, Chairman.

By order of the Executive Committee of the Congress.

HENRY H. SMITH, M.D., Chairman.
RICHARD J. DUNGLISON, M.D., Secretary.

[Our exchanges are earnestly requested to copy this circular.]

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TO THE PRESIDENT OF THE CONGRESS:

*Dear Sir:*—In accordance with the request of Dr. Joseph Jones, of New Orleans, La., President of the XIVth Section of the Ninth International Medical Congress, I will investigate the important questions embraced under Section VI of the Inquiries prepared for the Council of this Section by Dr. Jones. In order to throw light upon these important questions, I have upon consultation with the President of the XIVth Section, drawn up the following questions, relating chiefly to the effects of overflows and rice-culture upon the Public Health; and in order to obtain reliable information I address the following interrogations to the medical men in those localities, and respectfully request, as early as possible, a full and specific answer to each question.

*Question* 1. How long have you been cognizant of the results of overflows of the Mississippi river and its tributaries upon the Public Health?

2. Have you closely observed the effects of said overflows upon the Public Health?

3. Have you generally or uniformly observed an increase of sickness immediately succeeding these overflows?

4. If so, what diseases? Their character and type?

5. What local or general conditions (including topography) have you noted, controlling or modifying the effects of overflows upon the Public Health?

6. Have you kept statistics of the number and dates of these overflows, and the cases of sickness (if any) resulting therefrom? If so please give these statistics.

7. What is your experience of the effects of rice-culture upon the Public Health? and what the rate of death per 1000 population before and since the commencement of rice-culture?

8. Has malarial hæmaturia increased in frequency and severity during the past forty years? And is said increase due to the increased cultivation of rice in the Delta of the Mississippi river, or in other localities where rice is cultivated?

9. What effect has the camping and working of State prisoners in the low lands and swamps had upon said prisoners, held by Louisiana, Arkansas, Mississippi or other States so employing their prisoners.

10. How many deaths have been caused among State prisoners by malarial diseases, directly traceable to exposure to the malaria of the swamps?

11. Give facts bearing upon the relative effects of overflows and rice-culture upon the colored and white races?

12. Relations of drinking water to the *health* of the inhabitants of rice, sugar, and cotton plantations? Effects of swamp water? effects of cistern, well and spring water, for drinking purposes?

13. The best means of protecting the health of the laborers and inhabitants in such localities?

The physicians of the valley of the Mississippi river and the rice regions of Arkansas, of Alabama, Georgia, North and South Carolina, Florida and Texas, are earnestly requested to furnish their replies to

RICHARD H. DAY, M.D.,
Baton Rouge, La. P. O. Box 181.

## AMERICAN MEDICAL ASSOCIATION.

FORMED IN 1846.

Next annual meeting will be held June 7th, 8th, 9th, and 10th, 1887, in Chicago, Ill. President, E. H. Gregory, M.D., St. Louis, Mo. Permanent Secretary, W. B. Atkinson, M.D., Philadelphia, Penn. Assistant Secretary, J. Nevins Hyde, M.D., Chicago, Ill. Treasurer, Richard J. Dunglison, M.D., Philadelphia, Penn. Librarian, C. H. A. Kleinschmidt, M.D., Washington, D. C. Chairman of Committee of Arrangements, Charles Gilman Smith, M.D., Chicago, Ill.

All membership dues should be sent direct to the Treasurer, RICHARD J. DUNGLISON, M.D., lock box 1274, Philadelphia, Penn.

## MISCELLANEOUS.

THE INTERNATIONAL MEDICAL CONGRESS.—Our latest information is to the effect that the arrangements for the great International Congress at Washington are progressing favorably. In the case of many of our European brethren the occasion of a visit to the United States will be a unique one in their lives. We have not yet reached that familiarity with the Atlantic which is such an attainment in our American brothers:

> Qui siccis oculis monstra natantia,
> Qui vidit mare turgidum.

Nevertheless, many on this side are anxious to return the visits so generously made from the other. And whatever the discomforts of the voyage or the severity of the *mal de mer*, we are likely to have the advantage of much brotherly assistance and advice. It may mark a new era in the treatment of sea-sickness, when so many zealous physicians and surgeons are set in competition for their own relief. Be this as it may, great preparations are being made in Washington and elsewhere, and it only remains for Europe to see that the guests are forthcoming. It is the great element in all such gatherings that they be well "furnished with guests," and we would now urge on the profession and its leaders that they will do a great service by an early decision to attend, and still more by an early intimation of it to those concerned. There are American physicians who have visited England annually for thirty or forty years, and on rare occasions perhaps more than once in the year. The late Dr. Flint, whose absence will be acutely felt at Brighton this year and at Washington next, had come of late years to think nothing so refreshing as a run to the old home of his forefathers. Let us reciprocate the compliment on this high occasion, and make the very Atlantic the measure of our desire to cultivate international science and friendship—*Lancet*, July 24, 1886.

GLANDERS IN MAN has been heretofore considered a wellnigh incurable disease. The *Sanitary News* states that Dr. C. N. Cooper, county physician of Kane county, Ill., reports the recovery of a case which has been of two years' duration. A man died from the disease near Elgin and his wife contracted the disease from him. She has, after much suffering, so far recovered as to be able to support herself.

TYROTOXICON IN ICE-CREAM.—Prof. Victor C. Vaughan has discovered tyrotoxicon, or cheese poison, in some ice-cream which recently caused serious trouble in Michigan. The poison has thus been found in cheese, curd, and in ice-cream.

PROFESSOR KAPOSI will take the editorship of the *Archiv für Dermatologie und Syphilis*, made vacant by the death of Prof. Auspitz. Prof. Pick, of Prague, will remain co-editor.

CAN A MAN HAVE A FEMALE COMPLAINT?—A young man entered the Dispensary of the Chicago Policlinic recently, and going up to the clerk held out one of the Dispensary circulars with the question: "Say! isn't this the hour for diseases of women?" The clerk answered in the affirmative, when the young man said: "Well! I've got a disease of a woman and want to be treated."

CAVOUR AND BISMARCK ON STATE MEDICINE.—A little volume of some seven hundred pages, entitled "La Sapienza Politica del Cavour e del Bismarck," has just appeared, says *The Lancet*, under the competent editorship of SIGNOR FILIPPO MARIOTTI, the well-known Italian publicist and man of letters. Though primarily designed for the student of politics, the book has a great deal to interest the professional man, and not least the votary of the healing art, dealing as it does with the relations of hygiene to the State, with the right of Government to interfere in professional education, in the food and water supply of the community, and in the complex social questions which are brought home to the busy practitioner every day of his life. Signor Mariotti, remembering the saying of Bossuet, "C'est la maxime qui fait les grands homes," has perused the many discourses of the great Italian and German statesmen with a vigilant eye to those passages in which years of special thought and experience are condensed and crystallized, so to speak, in pregnant apophthegms and memorable sayings; and the result is a volume of inductions and illustrations which cover the whole field of political and public life, and put the reader in possession of guiding principles which, in such crises as that we are now passing through, will be found as valuable as they are opportune. When the tumult and the din of an "appeal to the country" has subsided, and the

approach of autumn brings the weary professional man the holiday he has earned, we can imagine few pleasanter or more profitable *compagnons de voyage* than this compact little treasury of the wisdom and the wit of the two great masters of statecraft and "unifiers of empire." Be it remembered that in continental parliaments the physician and the surgeon are far more numerously represented than in our own, and that many of the discussions, of which this volume gives us the etherialized essence, were provoked or shaped by the interpellations of medical deputies. A Virchow in the German chamber, a Tommasi-Crudeli or a Moleschott in the Italian one, cannot fail to imprint their finely-trained intellects on the debates in which they take part, and it is one of the charms of Signor Mariotti's skilful compilation that not only does he make us hear Cavour and Bismarck at their best, but that he enables us to catch the echoes of far-reaching discussions to which the medical interlocutor has contributed the scientific thoroughness and the philosophic calm.—*Lancet*, July 17, 1886.

IMPORTED SMALL-POX.—The Brooklyn Board of Health has recently discovered fourteen cases of small-pox traceable to a Polish boy landed at Castle Garden three weeks before the discovery of the disease. It is said that there is a quarrel between the health officers on the lower St. Lawrence, and that quarantine is consequently in a very lax condition. It seems entirely probable that the States may have to quarantine against New York unless the officials in that State exercise more caution.

THE BRAIN OF GAMBETTA.—M. DUVAL (Director of the Laboratory of Anthropology) has recently given to the Society of Anthropology at Paris a detailed description of the external configuration of the brain of Gambetta. He draws special attention to the fact that the cortical structure in the neighborhood of Broca's convolution has become markedly augmented. Usually this part of the brain assumes the form of an M, the two vertical limbs or sulci enclosing a small valve-like portion in the shape of a V. In the brain of Gambetta, however, as has been noted in other cases as well, this V-shaped portion has become doubled on itself, and assumed the form of a W instead of a V. When we recall the fact that Broca, in his memoirs, attributes to this part of the cerebral cortex (left or right sided, according as the individual is right or left handed) the function of articulate language, the unusual development of this convolution in Gambetta and others confirms, to a certain extent, this opinion now generally accepted. Gambetta was a great orator, his memory for words being most remarkable. He had acquired a rapid and most exact method of expressing his ideas. It is, therefore, somewhat admissible to associate his great oratorical power with this increased growth of cortical tissue in the neighborhood of Broca's convolution.—*British Medical Journal*, July 31, 1886.

HOW TO INTRODUCE DISEASE.—The *Sanitary News* says: Importers of rags and paper stock feel that they have gained an important victory now that the Treasury Department has been induced to change its ruling as to the bringing in of foreign rags. The recent order of the department does away with the compulsory fumigation and disinfection, the expense of which has caused so much grumbling in the trade.

"The health officer of the port still has the right to insist upon disinfection whenever, in his judgment, it is advisable," said a rag importer of New York recently, "but we don't anticipate the trouble and expense we have had with every cargo of rags heretofore. We shall have other importers in other lines of trade on our side in many cases, and the health officer will have to fight not the rag importer alone. For instance, if a vessel arrives with an assorted cargo, a portion of which is rags, and the health officer orders the rags to be disinfected, the consignees of all the rest of the cargo will be put to trouble and expense by the detention of the ship and the disinfection."

"Suppose an entire cargo of rags comes here; what will you do?" asked the reporter.

"Oh, we can avoid disinfection all the same. If a ship loaded with rags comes here we can stop her at Sandy Hook and order her to some other port where there there is no disinfecting process provided, land the rags there, and then reship them overland to any place we want to."

A SANITARY convention will be held at Big Rapids, Michigan, on November 18 and 19, under the auspices of the State Board of Health.

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**OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM JULY 31, 1886, TO AUGUST 6, 1886.**

Major Passmore Middleton, Surgeon, granted leave of absence until Sept. 10, 1886. (S. O. 100, Div. of the Atlantic, Aug. 3, 1886.)

Capt. R. H. White, Asst. Surgeon, ordered from Angel Island, Cal., to San Diego Bks., Cal., relieving Capt. Leonard Y. Loring, Asst. Surgeon. (S. O. 94, Dept. Cal., July 28, 1886.)

**OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U. S. NAVY, DURING THE WEEK ENDING AUGUST 7, 1886.**

Hutton, W. H. H., Surgeon, to proceed to Key West, Florida, for temporary duty. Aug. 7, 1886.

Bevan, A. D., Asst. Surgeon, ordered to examination for promotion. August, 1886.

Williams, L. L., Asst. Surgeon, when relieved at Buffalo, N. Y., to proceed to Mobile, Ala., for temporary duty. Aug. 2, 1886.

**OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDED AUGUST 7, 1886.**

Rush, Chas. D., P. A. Surgeon, detached from the receiving ship "Franklin" and ordered to the U. S. S. "Pinta."

Willson, W. G. G., P. A. Surgeon, detached from the U. S. S. "Pinta," ordered home and wait orders.

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## CORRIGENDA.

In THE JOURNAL of August 7, p. 149, in Dr. H. T. Byford's article on the "Treatment of Retroversion of the Uterus" Cut 7 should be No. 9, 8 should be No. 7, and 9 should be 8.

In THE JOURNAL of July 31, p. 116, 1st column, 8th line from bottom, for "Thus 10 grains carb. of calomel and sulphate of quiniæ" read "Thus 10 grains each of calomel and sulphate of quinine."